

Notice of Removal

EXHIBIT 2

CERTIFIED TRANSLATION

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**COMMONWEALTH OF PUERTO RICO
COURT OF FIRST INSTANCE
SAN JUAN SUPERIOR PART**

COMMONWEALTH OF PUERTO RICO,
through its Attorney General

Plaintiff

EXXON MOBIL CORPORATION, BP
P.L.C., CHEVRON CORPORATION,
CHEVRON PHILLIPS CHEMICAL
PUERTO RICO CORE, LLC,
CONOCOPHILLIPS, SHELL PLC,
STATIONS MANAGERS OF PUERTO
RICO, INC., TOTALENERGIES, AND
TOTALENERGIES MARKETING PR
CORP.,

Defendants

CIVIL NO:

COURTROOM:

RE: TORTS

Environmental Public Policy and Public
Nuisance Act (Act No. 416-2004) et als

COMPLAINT

TO THE HONORABLE COURT:

COMES NOW, the **COMMONWEALTH OF PUERTO RICO**, through the undersigned attorneys and, very respectfully, files suit against the Defendants, Exxon Mobil Corporation, BP P.L.C., Chevron Corporation, Chevron Philips Chemical Puerto Rico Core, LLC, ConocoPhillips, Shell plc, Stations Managers of Puerto Rico, Inc., TotalEnergies, and TotalEnergies Marketing PR Corp., based on the following:

I. The Parties

Plaintiff

1. The Plaintiff is the **Commonwealth of Puerto Rico** (hereinafter ELA, by its Spanish acronym, or Government of Puerto Rico). The Government oversees, among other duties,

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protecting the health and wellbeing of its citizens, conserving the natural and environmental resources of Puerto Rico and enforcing and seeking reparation for violations of the laws of Puerto Rico.


2. The **Attorney General** is authorized to file this action in his capacity of *parens patriae*, as the Commonwealth of Puerto Rico has a quasi-sovereign interest in the health and physical and economic well-being of its citizens who have suffered and will continue to suffer due to the conduct of the Defendants. The Commonwealth of Puerto Rico, as legal entity, has also suffered damages and losses as a direct and immediate result of the conduct of the Defendants. In accordance with the applicable laws and the Constitution of Puerto Rico, the Justice Department files the captioned claim in accordance with the allegations stated below.¹

Defendants

3. The Defendant, **Exxon Mobil Corporation**, is a publicly traded company incorporated in New Jersey and headquartered at 22777 Springwoods Village Parkway, Spring, Texas, USA 77389. Exxon Mobil Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "Exxon." Exxon Mobil Corporation controls and has controlled company-wide decisions, including those of its

¹ The Legislature has given the Commonwealth exclusive or supreme responsibility in the following areas, among others, within Puerto Rico's borders: flood prevention and beach conservation (see, 12 LPRA § 255A); the conservation of territorial waters, submerged lands, and maritime-terrestrial zone (see, Organic Act of the Department of Natural and Environmental Resources, 3 LPRA § 155(h)); the protection and conservation of coral reefs (see, 12 LPRA § 241); public waters and lands adjacent to public waters (see, 12 LPRA §§ 521, 603, and 613); the protection of wildlife and endangered species (see, 12 LPRA § 107 and the Organic Act of the Department of Natural and Environmental Resources, 3 LPRA § 155(i)); the national parks, reserves, and wetlands of Puerto Rico (see Laws of Puerto Rico Title 12 chap. 40, 40A and Laws of Puerto Rico Title 12 chaps. 250-260); the ports of Puerto Rico (see Laws of Puerto Rico, Title 23, chap. 25); public infrastructure (see Laws of Puerto Rico Title 22 chaps. 9, 11, 18, 21); roads and highways (see Laws of Puerto Rico Title 9, chap. 1); the protection of ancient or historic areas of Puerto Rico (see Law No. 374 of May 14, 1949 and 23 LPRA §§ 161-190uu); and land in Puerto Rico that does not belong to any person (see 1 LPRA § 3).

The Attorney General has sole authority to seek compensation for damages and losses with respect to these areas. The legal provisions granting it such exclusive authority are, inter alia, Articles 9, 16, 19, and 42 of Act No. 416-2004. 12 LPRA § 8002c, 12 LPRA § 8002j, 12 LPRA § 8002m, and 12 LPRA 8004l.

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subsidiaries, related to the amount and extent of fossil fuel production and sales, as well as marketing, climate change and greenhouse gas emissions from its fossil fuel products, and communication strategies regarding climate change and the link between fossil fuel use and related impacts with the climate in the environment and human beings. At all times relevant to this proceeding, Exxon did and does business in the Commonwealth of Puerto Rico. A significant amount of Exxon's fossil fuel products are or have been transported, marketed, distributed, promoted, manufactured, sold, and/or consumed in Puerto Rico, from which Exxon derives and has earned substantial revenues. For example, in 2022, Exxon reached an agreement to convert 177 gas stations in Puerto Rico to the Mobil brand. Despite Exxon's knowledge that its products have caused and will continue to cause harm related to the climate crisis in Puerto Rico, including Plaintiff, Exxon failed to warn Puerto Rican consumers about these existing risks. Exxon has maliciously distributed, marketed, advertised, and promoted its products in Puerto Rico, including on social media platforms such as Meta and through nationally circulated publications such as The New York Times, Time Magazine, The Washington Post, and The Wall Street Journal.

4. The Defendant, **BP P.L.C.** is a vertically integrated, multinational energy and petrochemical company, registered in England and Wales, with its principal place of business at 1 St. James' Square, London, England, SW1Y 4PD. BP P.L.C. It is the parent company of numerous subsidiaries, collectively referred to as the BP Group, that explore and extract oil and gas around the world; they refine oil into fossil fuel products such as gasoline; and market and sell petroleum, fuel, other refined petroleum products, and natural gas worldwide. BP P.L.C. controls and has controlled the decisions of the entire company, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, as well as communication strategies relating to climate change and the link between the use of



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fossil fuels and climate-related impacts on the environment and humans. At all times relevant to this proceeding, BP P.L.C. has marketed and sold its products in the Commonwealth of Puerto Rico. In 2015, BP P.L.C. sold its aviation business at Luis Muñoz Marín International Airport, which served more than 4 million passengers annually, to Puma Energy.² In addition, BP P.L.C. industrial and automotive lubricants are sold in Puerto Rico.

5. The Defendant, **Chevron Corporation**, is a vertically integrated multinational energy and chemical products company, incorporated in Delaware, with its global headquarters and principal place of business at 6001 Bollinger Canyon Road, San Ramon, California, USA 94583. During the times relevant to this proceeding, Chevron Phillips Chemical Puerto Rico Core, LLC has maintained an active business record in Puerto Rico.³ Chevron Corporation controls and has controlled company-wide decisions regarding the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. A significant amount of Chevron's fossil fuel product has been transported, marketed, distributed, promoted, manufactured, sold, and/or consumed in the Commonwealth of Puerto Rico, from which Chevron has derived substantial revenue. In 2012, Chevron sold its fuel distribution and storage businesses in Puerto Rico to Puma Energy, including 192 Texaco fueling stations, an aviation fuel supply, and storage tanks with a combined capacity of 430,000 barrels.⁴ Texaco stations are now returning to all of Puerto Rico through the rebranding

² Cision PR Newswire, *Puma Energy Acquires BP's Aviation Business In Puerto Rico*, May 18, 2015, <https://www.prnewswire.com/news-releases/puma-energy-acquires-bps-aviation-business-in-puerto-rico300085122.html>, (last visited November 7, 2023).

³ Securities and Exchange Commission, *Form S-4 Registration Statement Under the Securities Act of 1933*, Aug. 6, 2002, <https://www.sec.gov/Archives/edgar/data/1127399/000091205702030136/a2084101zs4.htm>, (last visited November 7, 2023).

⁴ Reuters, *Trafigura Unit Buys Caribbean Assets from Chevron*, Dec. 8, 2011, <https://jp.reuters.com/article/trafigura-chevron/trafigura-unit-buys-caribbean-assets-from-chevronidUSN1E7B70OZ20111208>, (last visited November 7, 2023).

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of Puma stations.⁵ Chevron has directed and continues to direct its negligent conduct toward the Commonwealth of Puerto Rico by marketing, advertising, promoting, and supplying its products in Puerto Rico, with the knowledge that these products have caused and will continue to cause harm related to the climate crisis in Puerto Rico.

6. The Defendant, **Chevron Phillips Chemical Puerto Rico Core, LLC** is a wholly-owned subsidiary of Chevron Corporation with its registered office in Las Mareas Neighborhood, Highway 710, K.M. 1.3, Guayama, Puerto Rico 00785.

7. The Defendant, **ConocoPhillips**, is a multinational energy company incorporated in Delaware with its principal place of business at 925 N. Eldridge Parkway, Houston, Texas, USA 77079. ConocoPhillips is made up of numerous divisions, subsidiaries and affiliates that execute ConocoPhillips' fundamental decisions related to all aspects of the fossil fuel industry, including exploration, extraction, production, manufacturing, transportation and marketing. ConocoPhillips controls and has controlled company-wide decisions about the amount and scope of fossil fuel production and sales, including those of its subsidiaries. The defendant ConocoPhillips Company is actively registered to do business in Puerto Rico.⁶ ConocoPhillips markets and sells, and has marketed and sold, a significant amount of gasoline and other fossil fuel products to consumers in Puerto Rico. Currently, there are seven (7) active Phillips66 gas stations located in Puerto Rico that continue to generate revenue for ConocoPhillips.⁷ In addition, a 2004 SEC filing reported that Chevron Phillips Chemical Company LLC (CPChem) owns a paraxylene production facility in

⁵ News is My Business, *Texaco Brand Returning to P.R. Market Through Rebranding of Puma Gas Stations*, June 28, 2019, <https://newsismybusiness.com/texaco-brand-returning-to-p-r-market-through-rebrandingof-puma-gas-stations/>, (last visited November 7, 2023).

⁶ Government of Puerto Rico, Department of State, Corporation Search, <https://rceweb.estado.pr.gov/en/search>, (last visited November 7, 2023).

⁷ Phillips 66, Station Finder, <https://www.phillips66gas.com/station-finder/>, (last visited November 7, 2023).

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Guayama, Puerto Rico.⁸ ConocoPhillips continues to promote the distribution, marketing, advertising, promotion and supply of its fossil fuel products in Puerto Rico, with the knowledge that these products have caused and will continue to cause damage related to the climate crisis in Puerto Rico. In addition, ConocoPhillips offers brand licenses in the Commonwealth of Puerto Rico, which would allow existing fuel companies to sell fuel under the ConocoPhillips brand.⁹

8. The Defendant, **Shell PLC** (formerly Royal Dutch Shell PLC), is a vertically integrated multinational energy and petrochemical company. Shell PLC is incorporated in England and Wales, with its headquarters and principal place of business at Shell Centre, London, England, SE17NA. Shell PLC is the ultimate parent company of numerous divisions, subsidiaries and affiliates, collectively referred to as the Shell Group. Shell PLC controls and has controlled company-wide decisions, including those of its subsidiaries, relating to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communication strategies relating to climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. Shell has illicitly distributed, marketed, advertised and promoted its products in Puerto Rico, including on social media platforms such as Meta. Shell has earned a substantial amount of revenue through the promotion, production and sale of fossil fuels that took place in Puerto Rico during the time relevant to this proceeding. Shell's website currently lists approximately fifty (50) active Shell gas stations in Puerto Rico.¹⁰ In addition, Shell

⁸ Securities and Exchange Commission, *Form 10-k, Chevron Phillips Chemical Company LLC*, December 31, 2023, https://www.sec.gov/Archives/edgar/data/1127399/000110465904006224/a04-2520_110k.htm, (last visited November 7, 2023).

⁹ Phillips 66, *Become a Brand Licensee*, <https://www.phillips66fuelsupplier.com/getting-started/brandlicensing/>, (last accessed November 7, 2023).

¹⁰ Shell United States, *Gas Station Near Me*, <https://www.shell.us/motorist/gas-station-near-me> (last visited November 7, 2023).



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PLC owns one hundred percent (100%) of Station Managers of Puerto Rico, Inc.¹¹ From 2001 to 2009, Shell owned a refining facility in Yabucoa, Puerto Rico, that produced gasoline, diesel, jet fuel, and waste fuels for the Puerto Rican market.¹²

9. The Defendant, **Station Managers of Puerto Rico, Inc.**, is a wholly-owned subsidiary of Shell PLC, with its registered office at Ochoa Building, 500 Calle de la Tranca, Suite 514, San Juan, Puerto Rico 00901.

10. The Defendant, **TotalEnergies**, is a French vertically integrated multinational energy and oil company founded in 1924. TotalEnergies engages in oil and gas exploration and production, refining, petrochemicals, and power distribution in various forms, with its global headquarters and business headquarters at 2 Place Jean Millier, 92078 Paris La Défense, France. TotalEnergies controls and has controlled company-wide decisions related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communication strategies related to climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. TotalEnergies has earned a substantial amount of revenue through the promotion, production, and sale of fossil fuels that took place in Puerto Rico during the time pertinent to this proceeding. TotalEnergies owns and operates approximately two hundred (200) gas stations in Puerto Rico, which have been in operation since 2004.¹³ In 2008, Esso Standard Oil PR, a subsidiary of Exxon, sold its one hundred and forty-five (145) gas stations and terminal and airport access stations in Puerto Rico and St. Thomas to Total

¹¹ Puerto Rico, Shell Tax Contribution Report 2020, <https://reports.shell.com/tax-contributionreport/2020/our-tax-data/americas/puerto-rico.html>, (last visited November 7, 2023).

¹² Oil and Gas Journal, *Shell Chemical to Buy Sunoco's Puerto Rico Refinery*, (September 7, 2001), <https://www.ogj.com/refining-processing/article/17261399/shell-chemical-to-buy-sunocos-puerto-ricorefinery>, (last visited November 7, 2023).

¹³ TotalEnergies, TotalEnergies in Puerto Rico, <https://totalenergies.com/puerto-rico>, (last visited November 7, 2024).



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Petroleum Puerto Rico Corp. (TPPRC), a subsidiary of Total Group.¹⁴ TotalEnergies has directed its negligent conduct toward Puerto Rico by intentionally and unfairly marketing, advertising, promoting, and supplying its products in Puerto Rico, with the knowledge that those products have caused and will continue to cause harm related to the climate crisis in Puerto Rico. Facebook's Meta Ad database catalogs multiple ads posted by TotalEnergies, promoting its product in Puerto Rico without warning consumers about the dangers related to global warming, synonymous with the production and purchase of TotalEnergies products. In addition, a TotalEnergies press release published in 2016 states that TotalEnergies has been present in the Caribbean for more than forty (40) years and describes itself as "a leader in major Caribbean markets, such as Puerto Rico."¹⁵

11. The Defendant, **TotalEnergies Marketing PR Corp.**, is a wholly-owned subsidiary of the TotalEnergies corporation with its registered office at Millenium Park Plaza, #15 Second Street, Suite 525, Guaynabo, Puerto Rico 00968.

II. Jurisdiction and Venue

12. The General Court of Justice of Puerto Rico has jurisdiction over the Defendants pursuant to 32 LPRA Appendix III R. 3., insofar as this case arises within the territorial limits of Puerto Rico, and the Defendants have conducted business within the Commonwealth of Puerto Rico at all times relevant to this Complaint.

13. The General Court of Justice of Puerto Rico has jurisdiction over the parties in this case pursuant to 10 LPRA § 269.

¹⁴ TotalEnergies, TotalEnergies in Puerto Rico, <https://totalenergies.com.pr/en/total-puertorico/totalenergies-puerto-rico>, (last visited November 7, 2023).

¹⁵ TotalEnergies, *Dominican Republic: Total Acquires the Country's Main Retail Network and Establishes its Leadership in the Caribbean*, January 27, 2016, <https://totalenergies.com/media/news/pressreleases/dominican-republic-total-acquires-countrys-main-retail-network-and-establishes-its-leadership>, (last visited November 7, 2023).

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14. The General Court of Justice of Puerto Rico has jurisdiction in this civil action pursuant to 4 LPRA § 25a.

III. The facts

15. For decades, the Defendants, important members of the fossil fuel industry, have misled consumers and the public about climate change. Since at least the 1960s, its own scientists have consistently concluded that fossil fuels produce carbon dioxide and other greenhouse gas pollutants that can have catastrophic consequences for the planet and its inhabitants.¹⁶ The Defendants took these internal scientific findings seriously and made large investments to protect their own assets and infrastructure from sea level rise, stronger storms and other impacts of climate change. However, instead of warning consumers and the public, the Defendants and their front companies or alter egos devised and conducted disinformation campaigns to discredit the scientific consensus on climate change; create doubts in the minds of consumers, the media, teachers, and the general public about the impacts of burning fossil fuels on climate change; and delaying the transition of the energy economy to a low-carbon future.¹⁷ These successful climate hoax campaigns had the purpose and effect of inflating and sustaining the fossil fuel market and delaying the transition to low-carbon energy sources. Which, in turn, increased greenhouse gas emissions, accelerated global warming, and caused devastating climate change in the Commonwealth of Puerto Rico.

16. As a result of the lies and deception of the Defendants and the fossil fuel industry, the Commonwealth of Puerto Rico has incurred or will incur billions of dollars in costs to clean up climate change-induced disasters, such as Hurricanes Irma and Maria, and is anticipated to

¹⁶ See Attachment A at ¶¶ 14–58.

¹⁷ See Attachment A at ¶¶ 59–104, 118–174.

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suffer additional substantial even more costly, damages in the future.¹⁸ This, as sea levels rise, storms become more frequent and severe, and the Commonwealth of Puerto Rico will have to incur more costs to fortify its coastline and lands and protect its population, businesses, infrastructure, and natural resources from a variety of other climate change hazards.¹⁹ Despite the clear damage to Puerto Rico and other communities across the country, ExxonMobil, BP, Chevron, ConocoPhillips, Shell, and TotalEnergies (the Defendants) continue to spread climate misinformation and hide and confuse consumers and the public from their ever-increasing efforts to cement dependence on fossil fuels. It is time to stop this deceptive conduct and assign the responsibility for remedying its effects to the Defendants, to whom it belongs, rather than to the taxpayers and the People of Puerto Rico.

17. The Plaintiff, the Commonwealth of Puerto Rico, by and through its Attorney General, files this lawsuit for damages and civil monetary penalties to cover the costs of protecting and restoring infrastructure, land, assets, natural resources, and other damages to the Commonwealth of Puerto Rico caused by the Defendants over decades for failing to warn about defects in its fossil fuel products and for its Deceptive trade practices in the marketing and promotion of oil, coal, and natural gas (collectively, fossil fuel products).

18. The Defendants are significant corporate members of the fossil fuel industry, including distributors, promoters, marketers, and/or sellers of fossil fuel products. Each Defendant financed, staffed, organized, and in some way supported efforts to mislead the public and

¹⁸ Government Puerto Rico, *Transformation and Innovation in the Wake of Devastation: An Economic and Disaster Recovery Plan for Puerto Rico*, August 8, 2018, pg. vii–xvi, <https://recovery.pr.gov/documents/pr-transformation-innovation-plan-congressional-submission080818.pdf>

¹⁹ See Attachment A at ¶¶ 189–193.



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consumers, inside and outside of Puerto Rico, about the role of fossil fuel products in causing the global climate crisis.

19. The rate at which Defendants have extracted and sold fossil fuel products has skyrocketed since the Second World War, as have emissions of carbon dioxide (CO₂) and other emissions from those products. Fossil fuel emissions (especially CO₂) are by far the main driver of global warming. The vast majority of all anthropogenic (human-caused) greenhouse gas emissions in history have occurred from the 1950s to the present, a period known as the Great Acceleration.²⁰ Approximately three-quarters of all industrial CO₂ emissions in history have occurred since the 1960s, and more than half have occurred since 1990. The annual rate of CO₂ emissions from the extraction, production and consumption of fossil fuels has increased substantially since 1990.

20. The Defendants' knowledge of the negative impacts of fossil fuel consumption follows almost exactly the onset of the Great Acceleration, meaning that Defendants have known for more than fifty (50) years that greenhouse gas pollution from fossil fuel products would have significant adverse impacts on the Earth's climate and sea level. With that knowledge, the Defendants took steps to protect their own assets from climate damage and risks through immense internal investment in research, infrastructure improvements, and plans to exploit new business opportunities in a warming world.

21. However, instead of warning consumers or the public or truthfully representing the known consequences of the intended and foreseeable use of their products, or working to minimize the harm associated with the use and combustion of such products, the Defendants concealed and misrepresented the dangers of fossil fuels. They also disseminated false and misleading

²⁰ See Attachment A at ¶¶ 1–13.

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information about the existence, causes and effects of climate change; and aggressively promoted the increasing use of their products in ever-increasing volumes. Since at least the late 1980s, the Defendants have spent millions of dollars orchestrating massive disinformation campaigns to cast doubt on the science of climate change; to spread climate-denying theories that their own scientists had already debunked; and to conceal the role of fossil fuels in accelerating the climate crisis.²¹ Recently, the Defendants have adopted a new strategy of commercial deception: greenwashing. At present, Defendants deceptively exaggerate their investments in wind, solar, and other low-carbon energy resources, failing to disclose that those investments represent a negligible portion of their overall business and that they, in fact, continue to increase fossil fuel production.²² The Defendants also falsely market certain fossil fuel products as environmentally friendly or non-polluting, while concealing the fact that those same products (and the operations that produce them) are the primary causes of climate change.²³ Also, Defendants, individually and collectively, played leadership roles in all of these campaigns, which were intended for and directed at the people of Puerto Rico. These campaigns continue to this day.

22. The Defendants' actions in concealing the dangers of their fossil fuel products, promoting false and misleading information, and engaging in mass campaigns to promote greater use of their fossil fuel products have successfully delayed the transition to a low-carbon economy, deepened consumers' dependence on fossil fuel products, and contributed substantially to the accumulation of CO₂ in the atmosphere that drives global warming and its physical, environmental and socioeconomic consequences, including those affecting the Commonwealth of Puerto Rico.

²¹ See Attachment A at ¶¶ 59–104.

²² See Attachment A at ¶¶ 118–160.

²³ See Attachment A at ¶¶ 161–174.

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23. Therefore, the Defendants' deceptive and wrongful conduct was a substantial factor in bringing about devastating impacts of climate change in Puerto Rico, including, but not limited to: sea level rise, alteration of the hydrologic cycle; hurricanes, tropical storms, and more frequent and intense extreme precipitation and associated flooding; more frequent and intense heat waves along with an exacerbation of localized heat island effects; more frequent and intense droughts; ocean acidification; destruction of coral reefs and mangrove forests; degradation of air and water quality; and loss of habitats and species. The consequences associated with these physical and environmental changes have aggravating effects on Puerto Rico's overpopulated communities, which often live in the most environmentally vulnerable areas. Accordingly, the Defendants are directly responsible for a substantial portion of the impacts related to the climate crisis in Puerto Rico.

24. As a Caribbean island, Puerto Rico is extremely vulnerable to the effects of sea level rise and other impacts of climate change. Average sea level in Puerto Rico is rising rapidly and will continue to rise substantially along Puerto Rico's coast and estuarine rivers, causing flooding, saltwater intrusion, erosion, tidal losses of wetlands, and loss of beaches.²⁴ In addition, extreme weather events (including tropical storms and hurricanes, droughts, and heat waves, among others) will become more frequent, longer-lasting, and severe.²⁵ The social, economic, and other consequences of these and other environmental changes, all due to anthropogenic global warming, will continue to increase in Puerto Rico.

25. The human, natural, and economic devastation brought by Hurricanes Irma and Maria in 2017 is a foretaste of the severe climate-related consequences facing Puerto Rico as a direct result of the Defendants' wrongful deception.

²⁴ See Attachment A at ¶¶ 189–193.

²⁵ *Ibid.*



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26. As a direct result of the environmental changes caused by the climate crisis, the Commonwealth of Puerto Rico has suffered and will continue to suffer serious damages. Serious damages includes, but is not limited to: flooding and loss of government or state-owned property; floods and loss of property and private businesses with the consequent loss of tax revenues. In addition, the injury or destruction of property facilities operated by the Commonwealth of Puerto Rico that are critical to Government operations, utilities, and risk management, as well as other assets essential to the health, safety, and well-being of the community. Likewise, damage or loss has been suffered and will be suffered by the natural resources of the Commonwealth of Puerto Rico, including coral reefs and mangrove forests, and their associated ecosystems and climate resilience benefits; damage to or loss of agricultural resources of the Commonwealth of Puerto Rico; increased costs of strengthening and maintaining the resilience of public infrastructure, much of which is located in vulnerable coastal municipalities; increased costs of providing government services; increased health care and public health costs; increased costs of planning and preparing for the adaptation and resilience of communities to the effects of the climate crisis; displacement, disruption and loss of coastal communities, including loss of life, with associated damage to the Commonwealth of Puerto Rico; and lower tax revenues due to impacts on Puerto Rico's tourism-based economy and oceans.²⁶

27. The Defendants' individual and collective conduct, including, but not limited to, knowingly introducing fossil fuel products in commerce, but failing to warn of the threats they pose to the global climate; the improper promotion of fossil fuel products, including the misrepresentation and concealment of known hazards associated with the intended use of those products; and its public deception campaigns designed to hide the connection between fossil fuel

²⁶ *Ibid.*



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products and global warming, was a substantial factor in bringing about the damage to the Commonwealth of Puerto Rico. In other words, the Defendants' concealment and misrepresentation of the known dangers of fossil fuel products, coupled with the simultaneous promotion of the rampant use of those products, boosted fossil fuel consumption and delayed the transition to a low-carbon future, resulting in increased greenhouse gas pollution and more severe impacts of the climate crisis in Puerto Rico.

28. Accordingly, the Plaintiff commences this action against the Defendants for negligent conduct; strict or absolute liability for failure to warn of defects in their products; and unfair and deceptive acts or practices in commerce or economic activities.

29. The Plaintiff hereby waives damages arising from federal property and those arising from the Defendants' supply of specialized, noncommercial fossil fuel products to the federal government for military and national defense purposes. The Plaintiff is not seeking any recovery or compensation attributable to these federal property damages.

30. The Plaintiff seeks to ensure that parties who have profited from misleading consumers and the public about climate change bear the costs of that deceptive business activity, rather than the Commonwealth of Puerto Rico, its taxpayers, or its residents or citizens.

31. A more detailed description of the facts on which this complaint is based is included in Attachment A, which are fully incorporated therein as part of its allegations.

Relevant Entities that are parties but that constitute associations and front groups of the fossil fuel industry used by the defendants

32. The **American Petroleum Institute** or API is a not-for-profit corporation headquartered in the District of Columbia. With more than six hundred (600) members, the API is the largest trade association in the fossil fuel industry. Its purpose is to promote the collective business interests of its individual members, including increasing consumer consumption of oil

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and gas to obtain financial gain from Defendants and effectively acting as a commercial arm for its member companies. On behalf of the Defendants and under their supervision and control, the API has participated in and led several coalitions, front groups, and organizations that have promoted misinformation about the climate impacts of fossil fuel products among consumers, including, but not limited to, the Global Climate Coalition, the Partnership for a Better Energy Future, the Coalition for American Jobs, the Alliance for Energy and Economic Growth and the Alliance for Climate Strategies. These front groups were formed to generate disinformation and climate promotion from a supposedly objective source, when, in reality, they were funded and controlled by the Defendants. The Defendants have benefited from the spread of this disinformation because, among other things, it has ensured a thriving oil and gas consumer market, resulting in substantial profits for the Defendants. The Defendants controlled, monitored, and directly participated in the API's misleading messages about climate change. All the Defendants and/or their predecessors in interest have been principal members of the API at times relevant to this litigation. All the Defendants are currently members of the API.

33. Executives from Exxon, Shell, BP, Chevron, and ConocoPhillips have served on the API Executive Committee and/or served as API Chairs, which is equivalent to serving as a corporate officer. For example, Exxon's chief executive served on the API Executive Committee for 15 of the 25 years from 1991 to 2016 (1991, 1996–97, 2001, 2005–2016). BP's chief executive served as chairman of the API in 1988, 1989 and 1998. Chevron's chief executive served as chairman of the API in 1994, 1995, 2003 and 2012. Meanwhile, the chairman of Shell was a member of the API Executive Committee from 2005 to 2006. ConocoPhillips President and chief executive Ryan Lance served as Chairman of the Board from 2016 to 2018, and Exxon President and chief executive, Darren Woods, served as Chairman of the Board of Directors from 2018 to



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2020. In 2020, the API elected Phillips 66 (ConocoPhillips) President and chief executive, Greg Garland, to serve a two-year term as Chairman of the Board. ConocoPhillips executives also served as members of the API Board of Directors at various times.

34. The **Information Council for the Environment** or ICE was created by coal companies and their allies, including the Western Fuels Association and the National Coal Association, to implement public advertising and outreach campaigns designed to discredit climate science and deny the connection between burning fossil fuels and climate change in the eyes of the public. Associated companies included Pittsburg and Midway Coal Mining (Chevron).

35. The **Global Climate Coalition** or GCC was an industry group created to preserve and expand consumer demand for fossil fuels, including by publicly questioning climate science and opposing initiatives to reduce greenhouse gas emissions. The GCC was founded in 1989, shortly after the first meeting of The Intergovernmental Panel on Climate Change or IPCC, the United Nations body for assessing the science related to climate change. The GCC was dissolved around 2001. Its founding members included the API and the National Coal Association, the predecessor of the National Mining Association. Throughout its existence, the GCC's corporate members included Amoco (BP), API, Chevron, Exxon, Shell Oil, Texaco (Chevron), and Phillips Petroleum (ConocoPhillips). Throughout its existence, other members and funders included ARCO (BP) and the Western Fuels Association.

IV. Causes of Action

i.

First Cause of Action Damages Environmental Public Policy and Public Nuisance Act

36. The Plaintiff reaffirms and incorporates by reference each and every one of the allegations contained in the previous paragraphs.

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37. Act No. 416-2004, as amended, empowers the Government of Puerto Rico, through the Department of Justice, to file legal claims to ensure environmental public policy. 12 LPRA sec. 8002c. This power includes actions to recover the total value of the damage caused to the environment and/or natural resources. *Id.* See also Art. 16 of Act No. 416-2004, 12 LPRA Sec. 8002j).

38. Article 19 of Act No. 416-2004 provides for the power of the Attorney General to bring an action for damages against any person based on damages for environmental violations. 12 LPRA sec. 8002m.

39. Similarly, Article 42 of Act No. 416-2004 allows the Government of Puerto Rico to recover any expenses incurred to deal with an environmental emergency. 12 LPRA sec. 8004l.

40. For its part, Article 277 of the Code of Civil Procedure of Puerto Rico, 32 LPRA sec. 2761 establishes that "[a]ll that is harmful to health..., or that interrupts the free use of property, in such a way as to impede the comfortable enjoyment of life or property, or that hinders the well-being of an entire neighborhood, or a large number of people, ... it constitutes a public nuisance that gives rise to an action. Such action may be brought by any ... public agency... and the judgment may order that the former cease, as well as decree compensation for damages."

41. The conduct of the Defendants violates the law and environmental public policy in Puerto Rico, and constitutes a public nuisance to the Government and citizens of Puerto Rico, for which the Defendants are responsible to the Government of Puerto Rico for the environmental and economic damages and damages caused by their conduct and for the expenses incurred by the Government of Puerto Rico to mitigate them.

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42. Defendants, individually and in coordination with each other, have engaged and continue to engage in illegal, negligent, reckless, knowing, and/or intentional conduct. Such behaviors include:

- a. Promoting uncertainty in people's minds about the existence, causes and effects of climate change;
- b. Promoting the sale and use of fossil fuels without warning consumers that the use of fossil fuels would lead to dangerous climate change;
- c. Promoting the sale and use of fossil fuels that the Defendants knew were dangerous and that would cause or exacerbate climate change and its related consequences, including, but not limited to, sea level rise, drought, extreme precipitation, and heat;
- d. Promoting the sale and use of fossil fuels that the Defendants knew were dangerous and that would cause or exacerbate climate change and its related consequences, including, but not limited to, sea level rise, drought, extreme precipitation events, and extreme heat events;
- e. Concealing the dangers that Defendants knew would result from the normal use of their fossil fuels by misrepresenting and raising doubts about the integrity of scientific information related to climate change;
- f. Promoting fossil fuels for uses that Defendants knew would be dangerous to consumers, the public, and the Commonwealth;
- g. Disseminate and finance the dissemination of information that misleads consumers and the public about the known and foreseeable risk of climate change and its consequences, which result from the normal and expected use of fossil fuels;

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- h. Deceptively portraying themselves as clean energy companies committed to reducing emissions, and,
- i. Misleadingly promoting their investments in alternative technologies as being able to reduce emissions on a large scale in the short term.

43. The Defendants' conduct has caused harm to public health and property, as well as to the ability of all Puerto Ricans to comfortably enjoy life and property. The Defendants' campaign of deception has been widespread and long-lasting. It has influenced the public's purchasing and investment decisions for decades, by driving increased demand for fossil fuels. It also reduced demand for and investment in clean energy, and delayed the transition to clean energy. This increase in demand directly led to a prolonged increase in greenhouse gas emissions and is a substantial factor in the climate damages in Puerto Rico.

44. These injuries constitute disorderly conduct under the laws of Puerto Rico because, without limitation, they unreasonably interfere with public health, public safety, public peace, public security, and public convenience. Likewise, the injuries caused obstruct the free use of property in a way that interferes with the comfortable enjoyment of life and property; are disruptions to the well-being of communities and neighborhoods throughout the Commonwealth; destroy and degrade public and private property and infrastructure; adversely affect natural resources, including beaches, coastal areas, marine reefs and species, terrestrial resources; affect a large number of people, including all citizens of the Commonwealth; and otherwise unjustifiably interfere with the common rights of the general public.

45. The conduct of the Defendants is the proximate cause of the Puerto Rico injuries. The Defendants knew that continued consumption of fossil fuels would lead to a climate crisis. However, they did not notice and chose to participate in a sophisticated campaign of deception

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that had the purpose and effect of sustaining and overestimating the consumption of fossil fuels. Puerto Rico's climate damages are the direct and foreseeable result of the Defendants' conduct.

46. The Defendants' continued interference with public rights is substantial and unreasonable. The damage to Puerto Rico is serious and more than Puerto Rico should bear without compensation. The deceptive acts and omissions of the Defendants are also of no social utility because there is no use in deceiving and confusing the public.

47. The Defendants are, therefore, a direct, proximate, and substantial cause of unreasonable and substantial interference with the common rights of the residents of Puerto Rico, as well as of all damages arising from such disturbance of public order.

48. The conduct of Defendants, as set forth herein, was committed maliciously, with grave disregard for the life, safety, and property of others. Therefore, the Plaintiff seeks compensation for damages caused to Puerto Rico's environment and natural resources, as well as infrastructure and public property as a result of Defendants' acts and omissions, which exceed one billion dollars in damages.

ii.

**Second Cause of Action
Tort Damages
for wrongful or negligent acts and omissions**

49. The former Art. 1802 of the Civil Code of 1930, 31 LPRA sec. 5141, provided that "[h]e who by action or omission causes damage to another, through fault or negligence, is obliged to repair the damage caused. The concurrent recklessness of the injured party does not exempt from liability, but entails the reduction of compensation".

50. The current Article 1536 of the Civil Code of 2020, 31 LPRA sec. 10801, contains a provision similar to the one transcribed above that reads as follows: "The person who through fault or negligence causes damage to another, is obliged to repair it".

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51. In Puerto Rico, a cause of action has been adopted to claim ecological damages, both patrimonial and moral. *Rivera v. SLG Diaz*, 165 DPR 408 (2005). In this cause of action, compensation can be requested *in natura* or according to the decrease in the value of the property.

52. The wrongful acts and omissions of the Defendants, which continue to this day, have violated and continue to violate their duty of reasonable care because, among other things:

- a. It was foreseeable and foreseen by the Defendants that the uncontrolled consumption of fossil fuels would cause harmful climate impacts on low-lying islands, such as Puerto Rico;
- b. It was foreseeable and foreseen by the Defendants that the fossil fuel industry could maintain or increase total fossil fuel consumption by creating uncertainty about the existence of climate change, flooding the market with discredited scientific theories about climate change, obscuring the role of fossil fuels in driving the climate crisis, and downplaying the risks of climate change to the planet and its communities;
- c. Compared to average consumers, the public, and the Commonwealth, the Defendants had superior knowledge of the harmful risks posed by fossil fuel products at every time relevant to this Complaint;
- d. The Defendants had the opportunity and ability to avoid or mitigate those risks, including by adequately warning about the climate impacts of fossil fuel consumption and halting their climate disinformation campaigns;
- e. For several decades, the Defendants have benefited greatly from their failure to warn and deceit, which has maintained and increased fossil fuel consumption and,

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f. There is no public interest or social value in allowing Defendants to knowingly disseminate false and misleading information about the dangers of fossil fuels or the existence, causes, and consequences of climate change.

53. The acts and omissions of the Defendants described in this complaint constitute culpable and negligent conduct in violation of 31 LPRA § 10801.

54. These acts and omissions have harmed and will continue to harm the Commonwealth of Puerto Rico, its citizens, and its natural and environmental resources, as well as infrastructure and public property, for a long time to come. The actions of the Defendants directly and immediately caused the damages suffered by the Commonwealth of Puerto Rico and its citizens.

55. The wrongful and negligent acts of the defendants have caused damages to the Government of Puerto Rico estimated at no less than one billion dollars.

iii.

**Third Cause of Action
Strict liability in the distribution and sale of
defective products for failure to provide adequate warnings
31 LPRA § 10807**

56. The Plaintiff reaffirms and incorporates by reference each and every one of the allegations contained in the preceding paragraphs.

57. The Civil Code of Puerto Rico establishes that "[t]he persons who sell in the trade flow a product that by its design or manufacture is unreasonably dangerous, are liable for the damages caused by said product, even if they do not incur in fault or negligence." 31 LPRA sec. 10807.

58. Thus, a person will have to compensate for the damages caused when a product becomes unsafe or when the benefits of the product do not outweigh its inherent risks. *Rodríguez*

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Méndez v. Laser Eye, 195 DPR 769 (2016). In addition, a product owner is liable for damages when his or her product fails to provide the user or consumer with adequate warnings or instructions regarding the hazards or risks inherent in the handling or use of the product that are foreseeable by the manufacturer. *Aponte Rivera v. Sears Roebuck*, 144 DPR 830 (1998).

59. Each Defendant had, and continues to have, a duty to exercise reasonable care in the marketing, promotion, distribution, and sale of fossil fuel products. All the Defendants had, and continue to have, a duty to exercise reasonable care in the production and dissemination of information about the impacts of fossil fuel products on the climate to users of those products, the public, and those responsible. Despite knowing at all times pertinent to this lawsuit that the burning of fossil fuels generates greenhouse gas pollution that causes global climate change and its attendant consequences, the Defendants failed to provide warnings commensurate with the risks associated with the intended use of their products. They also improperly promoted their products by omitting the dangers of which they were aware, and implemented sophisticated communication and public relations campaigns to mislead the public about the consequences of fossil fuel use. To this day, the Defendants continue to mislead the public by falsely and misleadingly promoting their products as beneficial to the climate and themselves as advocates for the shift to a low-carbon future, failing to warn that the consumption of their products is the primary driver of climate change. These acts and omissions, as intended, increased the demand for fossil fuels and delayed the energy transition away from fossil fuels, and thereby exacerbated the harmful consequences of climate change for Puerto Rico.

60. The Defendants are individuals who sell their fossil fuel products in the trade flow. Under Puerto Rico law, they had and continue to have a duty to provide adequate warnings about

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the foreseeable risks of the use of their products of which they are aware, including the dangers to the climate system posed by the ordinary and intended use of their fossil fuel products.

61. The Defendants have known for decades that the ordinary and intended use of their fossil fuel products generates greenhouse gases whose accumulation in the atmosphere poses serious threats to the climate system, the environment, and humanity, including coastal communities like Puerto Rico. The Defendants' early and sophisticated knowledge of the climate dangers of fossil fuels far exceeded that of ordinary consumers, the public, and the Commonwealth of Puerto Rico, who would not have recognized those latent dangers.

62. However, despite their knowledge of the climate hazards of their fossil fuel products, the Defendants have never issued adequate warnings about those hazards. Rather, the Defendants organized, directed, and funded disinformation campaigns to hide from the public the connection between their fossil fuel products and climate change, spending millions of dollars and deploying various front groups and industry associations to induce consumers to continue buying fossil fuels, regardless of the harm to communities and the environment.

63. The Defendants' failure to provide adequate warnings about the harmful effects of their fossil fuel products on the climate, and their improper promotion of their products, has harmed and will continue to harm the Commonwealth of Puerto Rico, its citizens, and its natural and environmental resources for a long time to come. Hence, the defendants are liable to the Commonwealth of Puerto Rico for the damages caused to its natural resources and the environment, and to its infrastructure and public property by the improper sale, promotion and distribution of their products without providing adequate warnings, whose damages are estimated at an amount of no less than one billion dollars.

iv.

Fourth Cause of Action



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Punitive Damages

64. The Plaintiff reaffirms and incorporates by reference each and every one of the allegations contained in the preceding paragraphs as if they were set forth in this document.

65. Puerto Rico law prohibits the Defendants from intentionally, recklessly, or negligently introducing harmful tangible matter into lands, real property, and natural resources owned, occupied, and controlled by the Commonwealth of Puerto Rico.

66. The Plaintiff owns, occupies, and controls land, real estate, and natural resources throughout Puerto Rico.

67. Despite knowing at all times pertinent to this lawsuit that the burning of fossil fuels generates greenhouse gas pollution that causes global climate change and its attendant consequences, the Defendants failed to provide warnings commensurate with the risks associated with the intended use of their products, improperly promoted their products by concealing from the public the dangers of which they were aware, and implemented sophisticated communication and public relations campaigns to mislead the public about the consequences of fossil fuel use. To this day, Defendants continue to mislead the public by falsely and misleadingly promoting their products as beneficial to the climate and themselves as advocates for change to a low-carbon future, failing to warn that the consumption of their products is the primary driver of climate change. These acts and omissions, as intended, artificially increased and prolonged the demand for fossil fuels and delayed the energy transition away from fossil fuels, thereby exacerbating the harmful consequences of climate change for Puerto Rico and harming the Commonwealth, its citizens, and its natural and environmental resources.

68. The Plaintiff failed to grant permission to the Defendants to cause flooding, extreme precipitation, caused by seawater or other materials entering their property as a result of the use of the Defendants' fossil fuel products.

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69. The Defendants' failure to warn and improper promotion of their fossil fuel products, which continue to this day, directly and immediately caused the harm suffered by the Commonwealth, its citizens, and its natural and environmental resources.

70. In addition, the Defendants' failure to warn and improper promotion of their fossil fuel products, which continue to this day, are a substantial factor in causing flooding, extreme rainfall, seawater, and other materials to enter the land, real estate, and natural resources that the Plaintiff controls, or occupies.

71. The Defendants' culpable and negligent conduct, as set forth herein, was committed maliciously, with grave disregard for the life, safety, and property of others. "[W]hen the act or omission constitutes a crime, is carried out intentionally or with serious disregard for the life, safety and property of others, the judge may impose additional compensation that is not greater than the amount of the damage caused." 31 LPRA sec. 10803. Therefore, the plaintiff seeks punitive damages ²⁷ in an amount that is reasonable, appropriate, and sufficient to punish the Defendants for the good of society and to deter them from committing the same or similar acts.

v.

**Fifth Cause of Action
Unfair and deceptive acts or practices
in trade or economic activities
10 LPRA § 259 and 10 LPRA § 268**

72. The Plaintiff reaffirms and incorporates by reference each and every one of the allegations contained in the preceding paragraphs as if they were set forth herein.

73. Despite knowing at all times pertinent to this lawsuit that the burning of fossil fuels generates greenhouse gas pollution that causes global climate change and its attendant consequences, the Defendants failed to provide warnings commensurate with the risks associated

²⁷ See 31 L.P.R.A. § 5425.

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with the intended use of their products, improperly promoted their products by concealing from the public the dangers of which they were aware, and implemented sophisticated communication and public relations campaigns to mislead the public about the consequences of fossil fuel use. To this day, the Defendants continue to mislead the public by falsely and misleadingly promoting their products as beneficial to the climate and themselves as advocates for the shift to a low-carbon future, failing to warn that the consumption of their products is the primary driver of climate change. These acts and omissions, as intended, artificially increased and prolonged the demand for fossil fuels and delayed the energy transition away from fossil fuels, and thereby exacerbated the harmful consequences of climate change for Puerto Rico.

74. These actions and omissions constitute unfair and deceptive trade practices in violation of 10 LPRA § 259, so pursuant to 10 LPRA Sec. 268(b) the Defendants are liable to the Commonwealth of Puerto Rico for damages incurred by engaging in such illegal practices occurring in commerce or economic activities as defined by the Monopolies and Restraint of Trade Act.

75. These acts and practices harmed the Commonwealth, its citizens and its natural and environmental resources. The actions of the Defendants directly and immediately caused damage to the Commonwealth, its citizens, and its natural and environmental resources, the damages of which are estimated to be in an amount of not less than one billion dollars.

V. Remedies Requested

WHEREFORE, the Government of Puerto Rico respectfully requests this Honorable Court to GRANT the present complaint and, by virtue thereof, issue a Judgment providing the following remedies:

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1. To award damages, jointly and severally, in an amount of not less than one billion dollars;
2. Award punitive damages in an amount of not less than one billion dollars;
3. Require the Defendants to contribute to an equitable fund to mitigate the ongoing nuisance that their illegal conduct has caused Puerto Rico, and to pay the costs of such abatement from such fund, including, but not limited to, the costs of strengthening public infrastructure against sea level rise and storm damage, restoring natural resources, financing local climate resilience measures, and rebuilding natural barriers to protect communities from sea level rise and climate-influenced storms;
4. Determine that the Defendants' acts and practices, as described in the Complaint, constitute multiple instances of illegal practices in violation of the Monopolies and Restraint of Trade Act, 10 LPRA § 259, and award the Commonwealth of Puerto Rico damages resulting from such unlawful practices pursuant to 10 LPRA § 268(b);
5. Permanently prohibit the Defendants from engaging in the unlawful practices described in the Complaint;
6. Require the Defendants to pay costs, expenses, and attorneys' fees related to this lawsuit;
7. Grant any other remedies that may be appropriate in law.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, today, July 15, 2024.

**Frank Torres-Viada Law Firm,
PSC**
P.O. Box 192084
San Juan, P.R. 00919-2084
Tel. 787- 754-1102
Fax 787 -754-1109

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s/FRANK TORRES-VIADA

Supreme Court No. 14724

ftv@ftorres-viada.com

s/JOSÉ A. ANDRÉU FUENTES

Supreme Court No. 9088

jaf@andreu-sagardia.com

Puerto Rico Legal Advisers, LLC

P.O. Box 19586

San Juan, PR 00910

Tel: 787- 625-3300

info@prlegaladvisers.com

s/RAMÓN ROSARIO CORTÉS

Supreme Court No. 17224

rosario@prlegaladvisers.com

Sher Edling LLP

100 Montgomery St., Ste. 1410

San Francisco, CA 94104

Tel. (628) 231-2500

Fax (628) 231-2929

s/VICTOR M. SHER

(in process of requesting admission
pro hac vice)

vic@sheredling.com

s/MATTHEW K. EDLING

(in process of requesting admission
pro hac vice)

matt@sheredling.com

s/KATIE H. JONES

(in process of requesting admission
pro hac vice)

katie@sheredling.com

s/ANTHONY M. TOHMÉ

(in process of requesting admission
pro hac vice)

anthony@sheredling.com

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ATTACHMENT A

I. Defendants are responsible for causing and accelerating climate change.

1. Man-made warming of the Earth is unequivocal. The atmosphere and oceans are warming, sea levels are rising, snow and ice cover are decreasing, oceans are acidifying, and hydrological systems have been altered, among other environmental changes.¹

2. The mechanism by which human activity causes global warming and climate disruption is well established: the warming of the oceans and atmosphere is overwhelmingly caused by anthropogenic (human-caused) greenhouse gas emissions.

3. Greenhouse gases are largely byproducts of the burning of fossil fuels by humans to produce energy and the use of fossil fuels to create petrochemicals. While there are several greenhouse gases that contribute to climate change, CO₂ is the main greenhouse gas emitted by human activity.

4. Prior to World War II, most anthropogenic CO₂ emissions were due to land-use practices, such as forestry and agriculture, which altered the ability of the land and global biosphere to absorb CO₂ from the atmosphere; the impacts of such activities on Earth's climate were relatively minor.

5. However, since then, both the annual rate and the total volume of anthropogenic CO₂ emissions have increased enormously following the advent of major uses of oil, gas and coal.

6. The graph below illustrates that fossil fuel emissions are the dominant source for the increase of atmospheric CO₂ since the middle of the 20th Century:

¹ IPCC, Global Carbon and Other Biogeochemical Cycles and Feedbacks, in Climate Change 2021: The Physical Science Basis. Contribution of Working Group I in the Sixth Assessment Report 688 (2021).



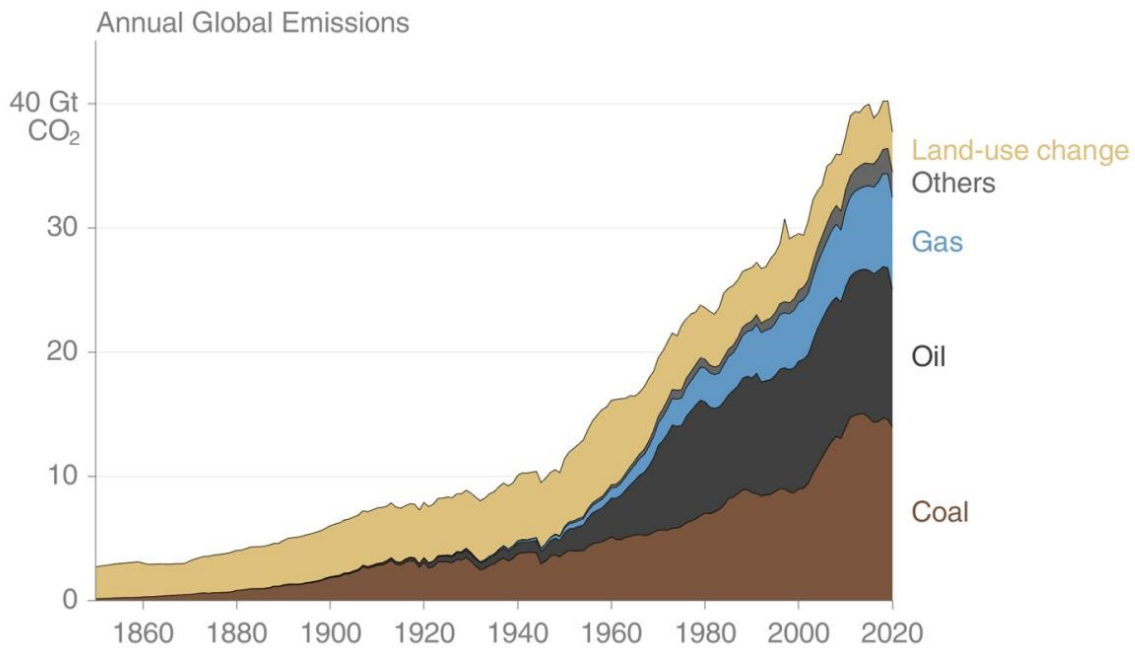


Figure 3: Annual global emissions, 1850-2020²

7. The recent acceleration of fossil fuel emissions has led to a corresponding sharp increase in atmospheric CO₂ concentration. Since 1960, the concentration of CO₂ in the atmosphere has increased from less than 320 parts per million (“ppm”) to about 419 ppm.³ The growth rate of atmospheric CO₂ has also accelerated. From 1960 to 1970, atmospheric CO₂ increased by an average of about 1 ppm per year; in the last five years, it has increased by about 2.5 ppm per year.⁴

8. The graph below shows the close link between the sharp increase in emissions from the burning of fossil fuels and the sharp increase in atmospheric CO₂ concentrations.

² Global Carbon Project, Global Carbon Budget 2021 83 (Nov. 4, 2021), https://www.globalcarbonproject.org/carbonbudget/21/files/GCP_CarbonBudget_2021.pdf.

³ Global Monitoring Laboratory, Trends in Atmospheric Carbon Dioxide, NOAA (last visited Sept. 30, 2022), <https://www.esrl.noaa.gov/gmd/ccgg/trends>.

⁴ Ibid.

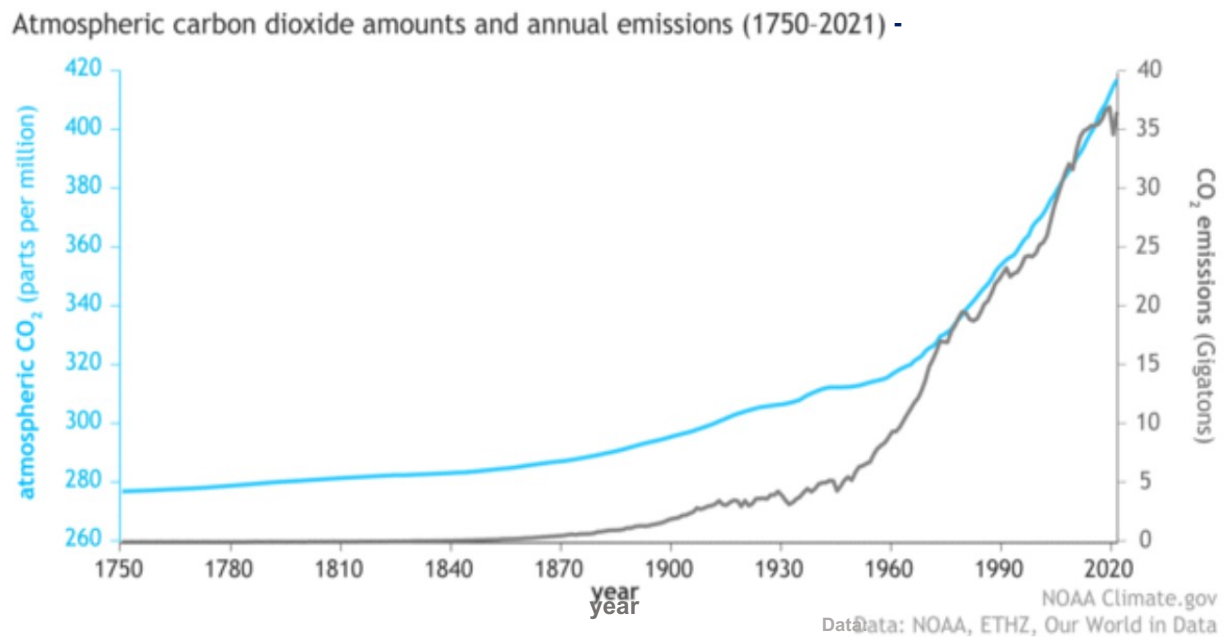


Figure 4: Atmospheric CO₂ concentration and annual emissions⁵

9. Due to the increased burning of fossil fuel products, greenhouse gas concentrations in the atmosphere have reached a level unprecedented in at least three million years.⁶

10. As greenhouse gases accumulate in the atmosphere, the Earth radiates less energy into space. This accumulation and the associated disruption of Earth's energy balance has myriad environmental and physical consequences, including but not limited to the following:

- a. Warming of Earth's average surface temperature, both locally and globally, and an increase in the frequency and intensity of heat waves; to date, the global average air temperature has increased approximately 1.09 °C (1.9 °F) above pre-industrial temperatures; temperatures in particular locations have risen more;
- b. Sea level rise, due to the thermal expansion of the warming of ocean waters and runoff from melting glaciers and ice sheets;
- c. Flooding and inundation of land and infrastructure, increased erosion, higher waves and tides, increased frequency and severity of storm surges, saltwater intrusion, and other impacts of sea level rise;

⁵ Rebecca Lindsey, Climate Change: Atmospheric Carbon Dioxide, NOAA (June 23, 2022), <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>

⁶ Science Daily, More CO₂ Than Ever Before in 3 Million Years, Shows Unprecedented Computer Simulation (Apr. 3, 2019), <https://www.sciencedaily.com/releases/2019/04/190403155436.htm>.

d. Changes in global climate generally towards longer periods of drought interspersed with fewer and more severe periods of rainfall, and the associated impacts on the quantity and quality of water resources available to human and ecological systems;

e. Ocean acidification, due to increased absorption of atmospheric carbon dioxide by the ocean;

f. Increased frequency and intensity of rainfall and extreme weather phenomena due to the increased capacity of the atmosphere to retain moisture and increased evaporation;

g. Changes in terrestrial and marine ecosystems and the consequent impacts on the variety of flora and fauna; and

h. Adverse impacts on human health associated with extreme weather, extreme heat, declining air quality, and vector-borne disease.

11. As discussed below, these consequences of Defendants' wrongful and deceptive conduct and their exacerbation of the climate crisis are already impacting Puerto Rico, its communities and its natural resources, and will continue to increase in severity in Puerto Rico. Without exacerbation of global warming caused by Defendants' deceptive and wrongful conduct as alleged herein, the current physical and environmental changes caused by global warming would have been far less than those observed to date. Similarly, the effects that will occur in the future would also be much less severe or would be avoided altogether.⁷

12. From at least 1965 to the present, Defendants improperly inflated the market for fossil fuel products by aggressively promoting the use of fossil fuels despite knowing the dangers associated with those products, and by misleading consumers and the public about the consequences of the normal use of fossil fuel products, including the failure to warn and the misrepresentation and concealment of the dangers of such products. As a result, substantially more anthropogenic greenhouse gases have been emitted into the environment than would have been absent such unlawful and deceptive conduct, exacerbating the effects of those emissions than would have otherwise been

⁷ See, e.g., Peter U. Clark et al., Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change, 6 Nature Climate Change 360, 365 (2016) ("Our model suggests that the human carbon footprint of about [470 billion tons] by the year 2000... has already committed the Earth to a global average sea level rise of ~1.7m (range 1.2 to 2.2 m).").



produced thereby causing greater damage to Puerto Rico. Defendants' unlawful, deceptive, and unbounded conduct, as alleged herein, caused a substantial portion of the greenhouse gas emissions in the global atmosphere. concentrations, and past, current and future disturbances to the environment (and consequent damage to Puerto Rico, its communities and its resources) associated with these.

13. Defendants, individually and collectively, have contributed substantially and measurably to the damages related to the climate crisis in Puerto Rico.

II. Defendants made every effort to understand and knew, or should have known, the dangers associated with their fossil fuel products.

14. The fossil fuel industry has known about the potential warming effects of greenhouse gas emissions since the 1950s, as they developed a sophisticated understanding of climate change that far exceeded the knowledge of the public, ordinary consumers, and the Commonwealth. Although hidden at the time, the industry's knowledge was later discovered by journalists from Inside Climate News and the Los Angeles Times, among others.⁸ In 1954, geochemist Harrison Brown and his colleagues at the California Institute of Technology wrote to API to inform the trade association that preliminary measurements of natural carbon files in tree rings indicated that fossil fuels had caused atmospheric carbon dioxide levels to rise by about 5% since 1840.⁹ API funded scientists for several research projects, and carbon dioxide measurements continued for at least a year and possibly longer, although the results were never published or made available to the public.¹⁰

15. In 1957, H.R. Brannon of Humble Oil (predecessor in interest to ExxonMobil) measured an increase in atmospheric carbon dioxide similar to that measured by Harrison Brown. Brannon communicated this information to API. Brannon knew Brown's measurements, compared them with his own, and found that they matched. Brannon published his results in the scientific literature, which was available to Defendants and/or their predecessors in interest.¹¹

⁸ See discussion *infra* ¶¶ 137–38.

⁹ See Benjamin Franta, Early Oil Industry Knowledge of CO₂ and Global Warming, 8 Nature Climate Change 1024, 1024–25 (2018).

¹⁰ Id.

¹¹ H.R. Brannon, Jr. et al., Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels, 38 Am. Geophysical Union Transactions 643, 643–50 (1957).



16. In 1959, API hosted a centennial celebration of the American oil industry at Columbia University in New York City.¹² High-level representatives of Defendants participated. One of the keynote speakers was nuclear physicist Edward Teller. Teller warned the industry that “a temperature increase corresponding to a 10 [%] increase in carbon dioxide will be sufficient to melt the icecap and submerge . . . [a]ll the coastal cities.” Teller added that since “a considerable percentage of the human race lives in coastal regions, I believe that this chemical contamination is more serious than most people believe.”¹³

17. After his speech, Teller was asked to “briefly summarize the danger from increased carbon dioxide content in the atmosphere in this century.” He replied that “there is a possibility that the polar icecaps will begin to melt and the level of the oceans will begin to rise.”¹⁴

18. In 1965, concern about the potential of fossil fuel products to cause disastrous global warming reached the highest levels in the United States scientific community. That year, the Environmental Pollution Panel of President Lyndon B. Johnson’s Scientific Advisory Committee reported that a 25% increase in carbon dioxide concentrations could occur by the year 2000, that such an increase could cause significant global warming, that melting of the Antarctic icecap and rapid sea level rise could occur, and that fossil fuels were the clearest source of carbon dioxide pollution.¹⁵

19. Three days after the report of President Johnson’s Scientific Advisory Committee was released, API President Frank Ikard addressed oil industry leaders in Chicago at the trade association’s annual meeting. Ikard relayed the report’s findings to industry leaders, saying:

The gist of the report is that there is still time to save the world’s people from the catastrophic consequences of pollution, but time is running out.¹⁶

Ikard also reported that “by the year 2000, the thermal equilibrium will have changed so much that it is likely to cause marked changes in climate beyond local or even

¹² See Allan Nevins & Robert G. Dunlop, Energy and Man: A Symposium (Appleton-Century-Crofts, New York 1960). See also Franta, Early Oil Industry Knowledge of CO₂ and Global Warming at 1024–25.

¹³ Edward Teller, Energy Patterns of the Future, in Energy and Man: A Symposium 53–72 (1960).

¹⁴ Id.

¹⁵ President’s Science Advisory Committee, Restoring the Quality of Our Environment: Report of the Environmental Pollution Panel 9, 119–24 (Nov. 1965), <https://hdl.handle.net/2027/uc1.b4315678>.

¹⁶ See Franta, Early Oil Industry Knowledge of CO₂ and Global Warming at 1024–25.



National efforts” and cited the report’s conclusion that “pollution from internal combustion engines is so severe and increasing so rapidly that a non-polluting alternative means of powering cars, buses and trucks is likely to become a national need.”¹⁷

20. Thus, in 1965, Defendants and their predecessors in interest knew that the scientific community had discovered that fossil fuel products, if used wastefully, would cause global warming by the end of the century, and that such global warming would have broad and costly consequences.

21. In 1968, API received a report from the Stanford Research Institute, which it had hired to assess the state of research on environmental pollutants, including carbon dioxide.¹⁸ The assessment backed up the conclusions of President Johnson’s Scientific Advisory Council three years earlier, where it stated: “Significant temperature changes are almost certain to occur by the year 2000, and ... there seems to be no doubt that the potential damage to our environment could be severe.” The scientists warned about the “melting of the Antarctic ice sheet” and informed API that “past and present studies on CO₂ are detailed and seem to adequately explain the current state of CO₂ in the atmosphere.” What was missing, the scientists said, was work on “air pollution technology and... systems in which CO₂ emissions would be brought under control.”¹⁹

22. In 1969, the Stanford Research Institute submitted a companion report on air pollution to API, in which it projected with alarming particularity that atmospheric CO₂ concentrations would reach 370 parts per million (“ppm”) by the year 2000.²⁰ This projection turned out to coincide almost exactly with the actual CO₂ concentrations measured in 2000 of 369.64 ppm.²¹ The report explicitly linked the increase in CO₂ levels to the combustion of fossil fuels, and considered it “unlikely that the observed increase in atmospheric CO₂ was due to changes in the biosphere.”

¹⁷ Id.

¹⁸ Elmer Robinson & R.C. Robbins, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants, Stanford Rsch. Inst. (Feb. 1968), <https://www.smokeandfumes.org/documents/document16>.

¹⁹ Ibid.

²⁰ Elmer Robinson & R.C. Robbins, Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement, Stanford Rsch. Inst. (June 1969).

²¹ NASA Goddard Institute for Space Studies, Global Mean CO₂ Mixing Ratios (ppm): Observations, <https://data.giss.nasa.gov/modelforce/ghgases/Fig1A.ext.txt>.



23. By virtue of their membership and participation in API at that time, Defendants received or should have received reports from the Stanford Research Institute and/or summaries of those reports and were notified of their findings.

24. In 1972, API members, including Defendants, received a status report on all API-funded environmental research projects. The report summarized the 1968 SRI report that described the impact of fossil fuel products (including those of Defendants) on the environment, including global warming and its concomitant consequences. Defendants and/or their predecessors in interest who received this report included, but were not limited to: American Standard of Indiana (BP), Asiatic (Shell), Atlantic Richfield (BP), British Petroleum (BP), Chevron Standard of California (Chevron), Esso Research (ExxonMobil), Ethyl (formerly affiliated with Esso, which was subsumed by ExxonMobil), Getty (ExxonMobil), Gulf (Chevron, among others), Humble Standard of New Jersey (ExxonMobil, Chevron, BP), Mobil (ExxonMobil), Pan American (BP), Shell, Standard of Ohio (BP), Texaco (Chevron), Union (Chevron), Skelly (ExxonMobil), Colonial Pipeline (ownership has included BP, ExxonMobil, and Chevron, among others), Continental (ConocoPhillips), Dupont (former owner of Conoco), Phillips (ConocoPhillips), and Caltex (Chevron).²²

25. In 1977, James Black of Exxon's Product Research Division appeared before the Exxon Corporation Management Committee regarding the greenhouse effect. The following year, Black performed before another internal Exxon group, PERCC. In a letter to the vice president of Exxon Research and Engineering, Black summarized his presentations.²³ He reported that "current scientific opinion is overwhelmingly in favor of attributing the increase in atmospheric carbon dioxide to fossil fuel consumption," and that doubling atmospheric carbon dioxide, according to the best available climate model, "would produce an increase in average temperature of about 2 °C to 3 °C over most of the Earth," with two or three times more heating at the poles. The figure below, taken from Black's report, illustrates Exxon's understanding of the timescale and magnitude of global warming that its products would cause.

²² American Petroleum Institute, Committee for Air and Water Conservation, Environmental Research: A Status Report (Jan. 1972), <http://files.eric.ed.gov/fulltext/ED066339.pdf>.

²³ Letter from J.F. Black, Exxon Research and Engineering Co., to F.G. Turpin, Exxon Research and Engineering Co., The Greenhouse Effect, Climate Files (June 6, 1978), <http://www.climatefiles.com/exxonmobil/1978-exxonmemo-on-greenhouse-effect-for-exxon-corporation-management-committee>.

pep

I, Juan E. Segarra, USCCI #06-067/translator, certify that the foregoing is a true and accurate translation, to the best of my abilities, of the document in Spanish which I have seen.

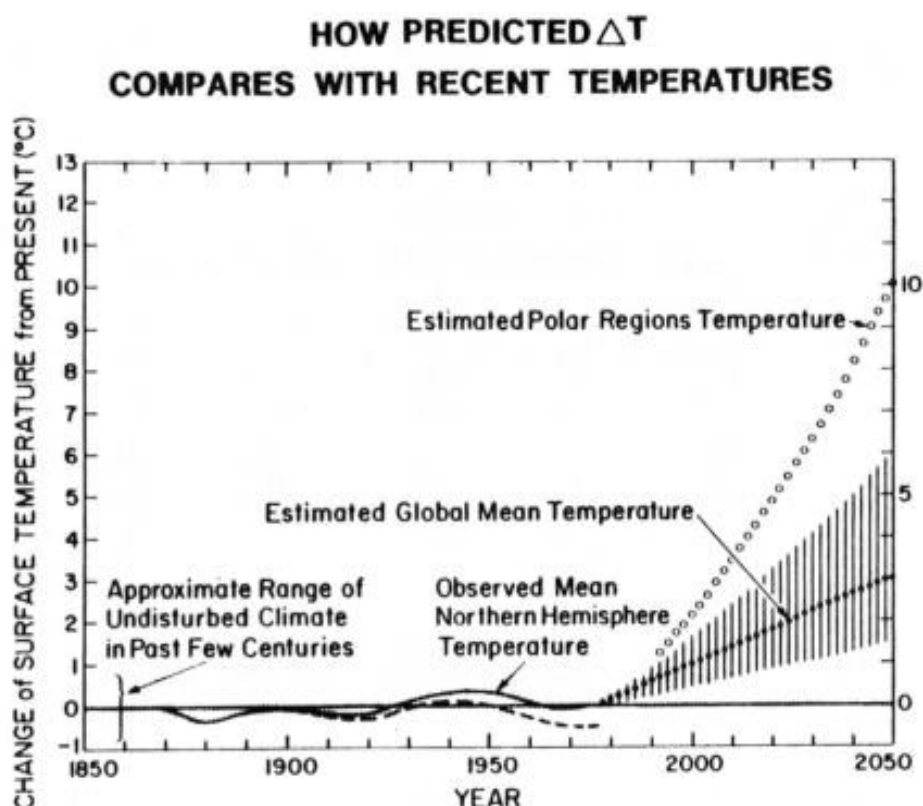


Figure 5: Future global warming predicted internally by Exxon in 1977²⁴

26. According to Black, the effects of that global warming would include “more rainfall,” which would “benefit some areas and harm others.” “Some countries would benefit, but others could see their agricultural production reduced or destroyed.” “However, even favored nations would be harmed for a while, as their agricultural and industrial patterns were established on the basis of the current climate.” Black reported that “it is currently estimated that humanity has a timeframe of between 5 and 10 years to obtain the necessary information” and “establish what needs to be done,” at which point “difficult decisions about changes in energy strategies could become critical.”²⁵

27. Also in 1977, Henry Shaw of Exxon’s Engineering and Research Technology Feasibility Center attended a meeting of scientists and government officials in Atlanta, Georgia, on developing research programs to study carbon dioxide and global warming. Shaw’s internal memo to Exxon’s John W. Harrison reported that “[t]he climatic effects of carbon dioxide release may be the primary limiting factor in energy production from fossil fuels[.]”²⁶

²⁴ *Ibid.* The company predicted global warming of 3°C by 2050, with 10°C warming in the polar regions. The difference between the dashed and solid curves before 1977 represents global warming that Exxon believed might already be occurring.

²⁵ *Ibid.*

²⁶ Henry Shaw, *Environmental Effects of Carbon Dioxide*, *Climate Investigations Ctr.* (Oct. 31, 1977), <https://www.industrydocuments.ucsf.edu/docs/tpw10228>.

28. In 1979, Exxon's W.L. Ferrall distributed an internal memo.²⁷ According to that memo, "[t]he most widely held theory [about global warming] is that: The increase [in carbon dioxide] is due to the burning of fossil fuels; [t]he increase in CO₂ concentration will lead to a warming of the earth's surface; [and] the current trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050... The potential problem is great and urgent." The memorandum adds that, if limits on fossil fuel production are not put in place,

Around 2010, there would be noticeable temperature changes, when the concentration [of carbon dioxide] reaches 400 ppm [parts per million]. Around 2035, there will be major climate changes, when the concentration approaches 500 ppm. Around 2050, there will be a doubling of the pre-industrial concentration [i.e. 580 ppm]. This doubling would lead to dramatic changes in the global environment[.]²⁸

Those projections proved remarkably accurate: average annual concentrations of CO₂ in the atmosphere exceeded 400 ppm in 2015 for the first time in millions of years.²⁹ Limiting the concentration of carbon dioxide in the atmosphere to 440 ppm, or a 50% increase from pre-industrial levels which, according to the memorandum, "is supposed to be a relatively safe level for the environment," would require fossil fuel emissions to peak in the 1990s and rapid deployment of non-fossil energy systems. The memo calculated that eighty percent of fossil fuel resources would have to be left underground to prevent carbon dioxide concentrations in the atmosphere from doubling. Some fossil fuels, such as shale oil, could not be substantially exploited at all.

29. But instead of heeding repeated warnings about the catastrophic impacts of climate change resulting from the burning of fossil fuels, in November 1979, Exxon's Henry Shaw wrote to Exxon's Harold Weinberg urging "a very aggressive defensive program in... atmospheric science and climate because there is a good chance that legislation will be passed that affects our business."³⁰ Shaw said the research effort needed to be expanded to "influence potential legislation on environmental controls" and "respond" to environmental groups, which had already opposed

²⁷ Letter from W.L. Ferrall, Exxon Research and Engineering Co., to Dr. R.L. Hirsch, Controlling Atmospheric CO₂, Climate Investigations Ctr. (Oct. 16, 1979), <https://www.industrydocuments.ucsf.edu/docs/mqwl0228>.

²⁸ Ibid.

²⁹ Nicola Jones, How the World Passed a Carbon Threshold and Why It Matters, Yale Env't 360 (Jan. 26, 2017), <http://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters>.

³⁰ Memorandum from H. Shaw to H.N. Weinberg, Research in Atmospheric Science, Climate Investigations Ctr. (Nov. 19, 1979), <https://www.industrydocuments.ucsf.edu/docs/yqwl0228>.



Synthetic fuel programs based on CO₂ emissions. Shaw suggested the formation of a “small working group” to evaluate a potential program on CO₂ and climate, acid rain, carcinogenic particulate matter and other pollution problems caused by fossil fuels.³¹

30. In 1979, API and its members, including Defendants, convened a task force to monitor and share cutting-edge climate research among the oil industry. The group was initially called the CO₂ and Climate Task Force, but in 1980 it changed its name to the Climate and Energy Task Force (hereinafter referred to as the “CO₂ Task Force”). Among its members were senior scientists and engineers from nearly every major U.S. multinational and oil and gas company, including Exxon, Mobil (ExxonMobil), Amoco (BP), Phillips (ConocoPhillips), Texaco (Chevron), Shell, Sohio (BP), Standard Oil of California (Chevron), and Gulf Oil (Chevron), among others. The Task Force was tasked with monitoring academic and government research, assessing the implications of emerging science for the oil and gas industries, and identifying where reductions in greenhouse gas emissions from Defendants’ fossil fuel products could be made.³²

31. In 1979, API prepared an information document on carbon dioxide and climate for the CO₂ Task Force, in which it stated that CO₂ concentrations were rising steadily in the atmosphere and predicted when the first clear effects of global warming might be detected.³³ API informed its members that although global warming would occur, it would probably not be detected until about the year 2000 because, as API believed, its effects were temporarily masked by a natural cooling trend. However, API warned its members that this cooling trend would reverse around 1990, adding to warming caused by CO₂.

32. In 1980, API’s CO₂ Task Force invited Dr. John Laurmann, “a recognized expert in the field of CO₂ and climate”, to make a presentation to its

³¹ Ibid.
³² Neela Banerjee, Exxon’s Oil Industry Peers Knew About Climate Dangers in the 1970s, Too, Inside Climate News (Dec. 22, 2015), <https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-aboutclimate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco>.
³³ Memorandum from R.J. Campion to J.T. Burgess, The API’s Background Paper on CO₂ Effects, Climate Investigations Ctr. (Sep. 6, 1979), <https://www.industrydocuments.ucsf.edu/docs/lqwl0228>.

members.³⁴ The meeting lasted seven hours and included a “full technical discussion” on global warming caused by fossil fuels, including “the scientific basis and technical evidence for CO₂ accumulation, the impact on society, modelling methods and their consequences, uncertainties and policy implications and conclusions that can be drawn from current knowledge.” Representatives of Standard Oil of Ohio (BP’s predecessor), Texaco (now Chevron), Exxon and API and the minutes of the meeting were distributed to API’s entire CO₂ Task Force. Laurmann informed the Task Force about the “scientific consensus on the potential for a major future climate response to rising CO₂ levels” and that there was “strong empirical evidence that [the increase in carbon dioxide] [was] caused by the anthropogenic release of CO₂, primarily from the burning of fossil fuels.” Unless fossil fuel production and use were controlled, atmospheric carbon dioxide would double pre-industrial levels by 2038, with “likely impacts” along the following trajectory:

1°C RISE (2005): BARELY NOTICEABLE

INCREASE OF 2.5°C (2038): MAIN ECONOMIC
CONSEQUENCES, STRONG REGIONAL DEPENDENCE

5°C (2067) RISE: CATASTROPHIC EFFECTS GLOBALLY

Laurmann warned the CO₂ Task Force that global warming of 2.5°C “would halt global economic growth[.]” Laurmann also suggested that action should be taken immediately, asking, “Is it time to act?” and noting that if achieving a strong market introduction of new energy sources would take a long time (i.e., decades), then there would be “no margin” to delay it. The minutes of the meeting of the CO₂ Task Force show that one of the objectives of the Task Force was “to help develop ground rules for [...] the cleaning of fuels in relation to the creation of CO₂,” and the Task Force discussed requirements for a “shift of energy sources” around the world, and away from fossil fuels.³⁵

33. In 1980, Imperial Oil Limited (a Canadian subsidiary of ExxonMobil) informed the managers and environmental staff of multiple Esso and Exxon affiliates that there was “no doubt” that fossil fuels were aggravating the buildup of CO₂ in the

³⁴ Letter from Jimmie J. Nelson, American Petroleum Institute, to AQ-9 Task Force, The CO₂ Problem: Addressing Research Agenda Development, Climate Investigations Ctr. (Mar. 18, 1980), <https://www.industrydocuments.ucsf.edu/docs/gffl0228>.

³⁵ Ibid.



atmosphere.³⁶ Imperial noted that “there is technology to remove CO₂ from stack gases, but removing just 50% of CO₂ would double the cost of power generation.”³⁷

34. In December 1980, Exxon’s Henry Shaw distributed a memorandum on the “Greenhouse Effect of CO₂.”³⁸ Shaw said that the future accumulation of carbon dioxide was a function of fossil fuel use and that internal calculations at Exxon indicated that atmospheric carbon dioxide would double around 2060. According to the “most widely accepted” climate models, Shaw reported, this doubling of carbon dioxide would “most likely” result in global warming of about 3°C, with a greater effect on the polar regions. Calculations predicting a lower temperature rise, such as 0.25 °C, “were not very appreciated by the scientific community,” Shaw said. Shaw also noted that the oceans’ ability to absorb heat could delay (but not prevent) temperature rise by “a few decades,” and that natural, random temperature fluctuations would mask global warming due to CO₂ until about the year 2000. The memo included the figure below, illustrating the global warming anticipated by Exxon, as well as the company’s idea that significant global warming would occur before exceeding the range of natural variability.

³⁶ Imperial Oil Ltd., Review of Environmental Protection Activities for 1978–1979 (Aug. 6, 1980), <http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2>.

³⁷ Ibid.

³⁸ Memorandum from Henry Shaw to T.K. Kett, Exxon Research and Engineering Company’s Technological Forecast: CO₂ Greenhouse Effect (Dec. 18, 1980), <https://www.documentcloud.org/documents/2805573-1980Exxon-Memo-Summarizing-Current-Models-And.html>.



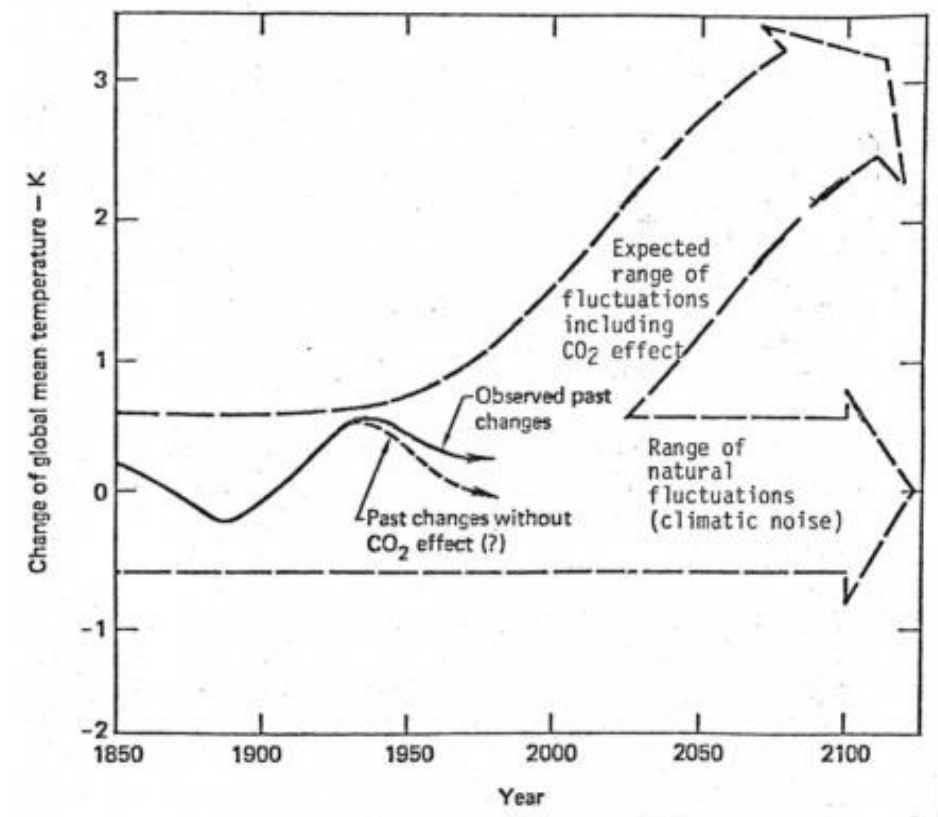


Figure 6: Future global warming predicted internally by Exxon in 1980³⁹

The memorandum reported that such global warming would cause “an increase in precipitation [...] and increased evaporation,” which would have a “dramatic impact on soil moisture and, in turn, agriculture.” Some areas would become deserts and the American Midwest would become “much drier.” “[T]he weeds and pests,” the memo reported, “would tend to thrive with rising global average temperatures.” Other “serious global problems” could also arise, such as the melting of the West Antarctic ice sheet, which “could lead to a rise in sea level on the order of 5 meters.” The memo called for “society” to foot the bill, estimating that some adaptation measures would cost no more than “a small percentage” of gross national product (i.e., \$400 billion in 2018).⁴⁰ Exxon predicted that no national policy measures would be adapted until around 1989, when the Department of Energy would finish a ten-year study on carbon dioxide and global warming.⁴¹ Shaw also reported that Exxon had studied several responses to avoid or reduce carbon dioxide accumulation, including “stopping all fossil fuel combustion at the 1980s rate” and “investigating

³⁹ *Ibid.* The company anticipated a doubling of carbon dioxide around 2060 and that the oceans would delay the warming effect by a few decades, leading to warming of about 3°C by the end of the century.

⁴⁰ *Ibid.*; see Gross National Product, Fed. Reserve Bank of St. Louis (updated Mar. 26, 2020), <https://fred.stlouisfed.org/series/GNPA>.

⁴¹ Memorandum from Henry Shaw to T.K. Kett, Exxon Research and Engineering Company’s Technological Forecast: CO₂ Greenhouse Effect (Dec. 18, 1980), <https://www.documentcloud.org/documents/2805573-1980Exxon-Memo-Summarizing-Current-Models-And.html>.

the introduction to the market of fossil fuel technologies.” The memorandum estimated that such non-fossil energy technologies “would require 50 years to enter and reach about half of the total [energy] market.”⁴²

35. In February 1981, Exxon’s Office of Contract Research prepared and distributed a “CO₂ Scoping Study” to the leadership of Exxon Research and Engineering Company.⁴³ The study examined Exxon’s current research on carbon dioxide and considered whether to further expand Exxon’s research on carbon dioxide or global warming at the time. The study recommended against expanding Exxon’s research activities in those areas because its current research programs were sufficient to achieve the company’s goals of closely monitoring federal research, building credibility and public relations value, and developing internal expertise regarding CO₂ and global warming. However, the study recommended that Exxon focus its activities on monitoring, analyzing and disseminating external research on CO₂ and global warming. The study claimed that Exxon’s James Black was actively monitoring and keeping the company informed about external research developments, including those on climate models and “CO₂-induced effects.” The study also noted that other companies in the fossil fuel industry were “auditing government meetings on the issue.” As for “options to reduce the accumulation of CO₂ in the atmosphere,” the study noted that while capturing CO₂ from flue gas (i.e., the exhaust gases produced by combustion) was technologically possible, the cost was high, and “energy conservation or switching to renewable energy sources represents the only options that might make sense.”⁴⁴

36. Thus, in 1981, Exxon and other fossil fuel companies were actively monitoring all aspects of research on CO₂ and global warming, both domestically and internationally, and Exxon had recognized that a shift to renewable energy sources would be necessary to avoid a large buildup of CO₂ in the atmosphere and consequent global warming.

37. Exxon scientist Roger Cohen warned colleagues in a 1981 internal memo that “future developments in global data collection and analysis, coupled with advances in climate modeling, may provide strong evidence of a

⁴² Ibid.

⁴³ Letter from G.H. Long, Exxon Research and Engineering Co., to P.J. Lucchesi et al., Atmospheric CO₂ Scoping Study, Climate Investigations Ctr. (Feb. 5, 1981), <https://www.industrydocuments.ucsf.edu/docs/yxfl0228>.

⁴⁴ Ibid.



delayed CO₂ effect of a truly substantial magnitude”, and that in certain circumstances it would be “very likely that we will unambiguously recognize the threat by the year 2000.”⁴⁵ Cohen had expressed concern that the memorandum underestimated the potential effects of the incessant CO₂ emissions from Defendants’ fossil fuel products, stating that: “it is clearly possible that [Exxon’s Planning Division] . . . produces effects that will in fact be catastrophic (at least for a substantial fraction of the world’s population).”⁴⁶

38. In 1981, Exxon's Henry Shaw, the company's principal climate researcher at the time, prepared a summary of Exxon's current position on the greenhouse effect for Edward David Jr., president of Exxon Research and Engineering, in which he stated in relevant part:

- “Atmospheric CO₂ will double in 100 years if fossil fuels grow by 1.4% per year.
- 3 °C Increase in global median temperature 10°C increase at the poles if CO₂ is doubled.
 - Major changes in rainfall/agriculture
 - Polar ice could melt”⁴⁷

39. In 1982, another report prepared for API by scientists at Columbia University's Lamont-Doherty Geological Observatory acknowledged that the atmospheric concentration of CO₂ had increased significantly compared to the beginning of the industrial revolution: from about 290 ppm to about 340 ppm in 1981. The report also acknowledged that, despite differences in climate model predictions, there was scientific consensus that "a doubling of atmospheric CO₂ from . . . the value of the pre-industrial revolution would result in an average global temperature increase of (3.0 ± 1.5) °C [5.4 ± 2.7 °F]." In addition, it warned that "warming of this type can have serious consequences for man's comfort and survival, since aridity and precipitation patterns can change, the height of the sea level can rise considerably, and the global food supply could be affected."⁴⁸

⁴⁵ Memorandum from R.W. Cohen to W. Glass, ClimateFiles (Aug. 18, 1981), <http://www.climatefiles.com/exxonmobil/1981-exxon-memo-on-possible-emission-consequences-of-fossil-fuelconsumption>.

⁴⁶ Ibid.

⁴⁷Memorandum from Henry Shaw to Dr. E.E. David, CO₂ Position Statement, Inside Climate News (May 15, 1981) (footnote omitted), <https://insideclimatenews.org/documents/exxon-position-co2-1981>.

⁴⁸ American Petroleum Institute, Climate Models and CO₂ Warming: A Selective Review and Summary (Columbia Univ., Mar. 1982), <https://assets.documentcloud.org/documents/2805626/1982-API-Climate-Models-and-CO2Warming-a.pdf>.

Exxon’s own modeling research confirmed this, and the company’s results were subsequently published in at least three peer-reviewed scientific papers.⁴⁹

40. Also in 1982, Exxon’s Director of Environmental Affairs distributed a manual on climate change to a “wide circulation [of] Exxon’s management . . . intended to familiarize Exxon personnel with the <sup>“RISING ATMOSPHERIC CO₂ AND RISING TEMPERATURES
GLOBAL AVERAGE AS A FUNCTION OF TIME</sup> subject.”⁵⁰ The manual was “restricted to Exxon personnel and not to be distributed externally.” The manual collected scientific data on climate change, confirmed that the burning of fossil fuels is the main anthropogenic contributor to global warming, and estimated a doubling of CO₂ (i.e., 580 ppm) by 2070 with a “most likely temperature increase” of more than 2 °C over the 1979 level, as shown in the figure below.

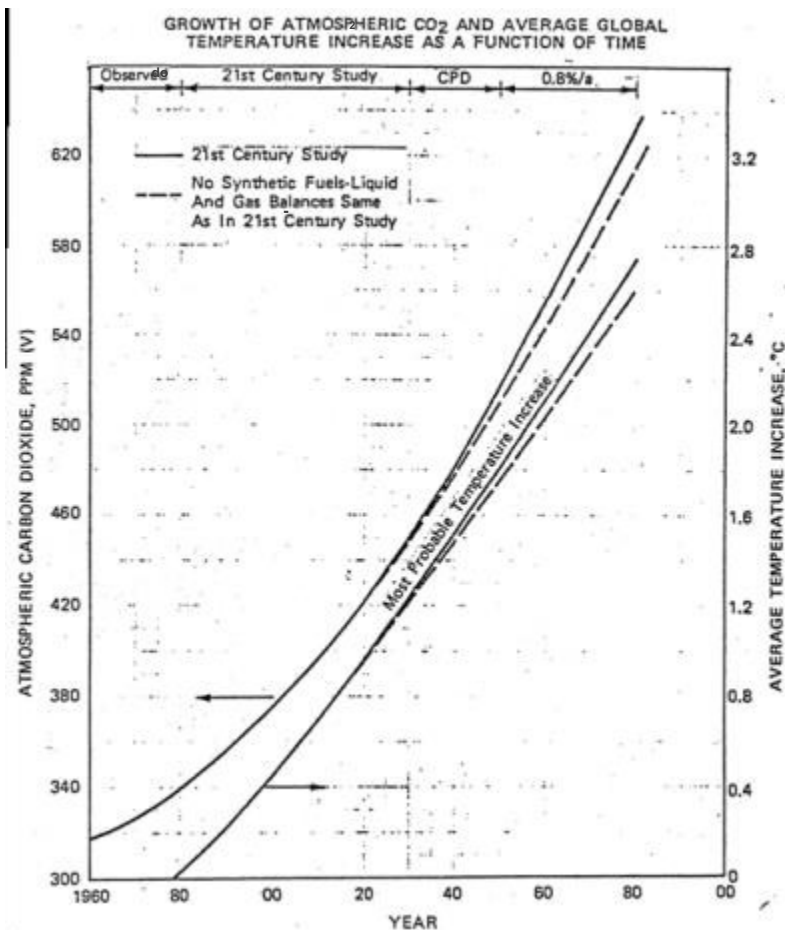


Figure 7: Exxon’s internal prediction of future CO₂ increase and global warming since 1982⁵¹

The report also warned of the “uneven global distribution of increased precipitation and evaporation,” explaining that “disturbances in the current equilibrium of

⁴⁹ See Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, ClimateFiles (Sept. 2, 1982), <http://www.climatefiles.com/exxonmobil/1982exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research> (discussing research papers and summarizing research findings in climate modeling).

⁵⁰ Memorandum from M.B. Glaser, CO₂ “Greenhouse” Effect, Exxon Research and Engineering Company (Nov. 12, 1982), <https://insideclimatenews.org/wp-content/uploads/2015/09/1982-Exxon-Primer-on-CO2-Greenhouse-Effect.pdf>.

⁵¹ *Ibid.* The company predicted that by around 2070 (left curve) atmospheric carbon dioxide concentrations would double from pre-industrial levels, with a temperature increase of more than 2°C over the 1979 level (right curve). The same document indicated that Exxon estimated that by 1979 a global warming effect of about 0.25°C could have already occurred.

global water distribution would have a dramatic impact on soil moisture and, in turn, on agriculture,” and that the U.S. Midwest would be affected by droughts. In addition to the effects on global agriculture, the report states, “there are some potentially catastrophic effects that need to be considered.” The melting of the Antarctic ice sheet could lead to a global sea level rise of five meters, which “would lead to flooding across much of the U.S. East Coast, including the state of Florida and Washington, D.C.” Weeds and pests “would tend to thrive with rising global temperatures.” The manual warned of “positive feedback mechanisms” in the polar regions, which could accelerate global warming, such as peat deposits “containing large stocks of organic carbon” that are “exposed to oxidation” and release their carbon into the atmosphere. “Similarly,” the manual warned, “thawing could also release large amounts of carbon currently sequestered as methane hydrates” on the sea floor. “All biological systems would be affected” and “the most serious economic effects could affect agriculture.”

41. The report recommended studying “soil erosion, salinization, or collapse of irrigation systems” to understand how society might be affected and respond to global warming, as well as the “health effects” and “climate-related stress associated with famine or migration.” The report estimated that undertaking “some, but not all” adaptation measures would cost “a small percentage of the estimated gross national product by the middle of the next century” (i.e., \$400 billion in 2018).⁵² To avoid such impacts, the report makes an analysis of the Massachusetts Institute of Technology and the Oak Ridge National Laboratory, which studied energy alternatives and the requirements for introducing them into widespread use, and which recommended that “vigorous development of non-fossil energy sources be initiated as soon as possible.”⁵³ The manual also noted that other greenhouse gases linked to fossil fuel production, such as methane, would contribute significantly to global warming, and that concerns about CO₂ would be reduced if fossil fuel use were reduced due to “high price, scarcity [or] lack of availability.” “Mitigation of the ‘greenhouse effect’ would require major reductions in

⁵² See Gross National Product, Fed. Reserve Bank of St. Louis (updated Mar. 26, 2020), <https://fred.stlouisfed.org/series/GNPA>.

⁵³ Memorandum from M.B. Glaser, CO₂ “Greenhouse” Effect, Exxon Research and Engineering Company (Nov. 12, 1982), <https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenho%20Effect.pdf>.



burning fossil fuels,” the manual stated. The manual was widely distributed to Exxon leaders.

42. In September 1982, the director of the Laboratory of Theoretical Sciences and Exxon mathematician Roger Cohen wrote to Alvin Natkin of Exxon’s Office of Science and Technology to summarize Exxon’s internal research on climate models.⁵⁴ Cohen reported:

[I]n recent years, a clear scientific consensus has emerged regarding the expected climate effects of the increase in atmospheric CO₂. The consensus is that doubling atmospheric CO₂ from its pre-industrial value would result in an average global temperature increase of $(3.0 \pm 1.5)^{\circ}\text{C}$. . . The temperature increase is projected to be unevenly distributed on Earth, with above-average temperature elevations in the polar regions and relatively small increases near the equator. There is unanimous agreement in the scientific community that a temperature increase of this magnitude would cause significant changes in the Earth’s climate, including the distribution of rainfall and alterations to the biosphere. The time needed to double atmospheric CO₂ depends on future global consumption of fossil fuels.

Cohen described Exxon’s own climate modeling experiments, reporting that they produced “a global average temperature increase that falls within the range of scientific consensus,” were “consistent with published predictions from more complex climate models,” and “also agreed with estimates of global temperature distribution during a given prehistoric period when the Earth was much warmer than today.” Cohen wrote, “[i]n summary, the results of our research are in agreement with the scientific consensus on the effect of rising atmospheric CO₂ on climate.” Cohen noted that the results would be presented to the scientific community by Exxon collaborator Martin Hoffert at a Department of Energy meeting, as well as by Exxon’s Brian Flannery at the Exxon-sponsored Ewing Symposium later that year.

43. In October 1982, at the fourth biennial Maurice Ewing Symposium at the Lamont-Doherty Geophysical Observatory, attended by members of API and Exxon Research and Engineering Company, the president of the Observatory, E.E. David gave a speech entitled “Inventing the Future: Energy and the CO₂ ‘Greenhouse Effect,’”⁵⁵ His comments included the following statement: “Few people doubt that the world has entered an energy transition away from dependence on fossil fuels and towards a combination of

⁵⁴ Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, Climate Files (Sept. 2, 1982), <http://www.climatefiles.com/exxonmobil/1982-exxonmemo-summarizing-climate-modeling-and-co2-greenhouse-effect-research>.

⁵⁵ Dr. E.E. David, Jr., President, Exxon Research and Engineering Co., Remarks at the Fourth Annual Ewing Symposium, Tenafly, NJ, ClimateFiles (Oct. 26, 1982), <http://www.climatefiles.com/exxonmobil/inventing-futureenergy-co2-greenhouse-effect>.



renewable resources that will not pose problems of CO₂ accumulation.” He went on to talk about the human opportunity to address anthropogenic climate change before the point of no return:

It is ironic that the greatest uncertainties about CO₂ accumulation are not in predicting what the climate will do, but in predicting what people will do . . . It seems that we still have time to generate the wealth and knowledge that we will need to invent the transition to a stable energy system.

44. In the early 1980s, under Exxon's direction, Exxon climate scientist Henry Shaw forecasted CO₂ emissions from fossil fuel use. Those estimates were incorporated into Exxon's energy projections for the 21st Century and distributed among Exxon's various divisions. Shaw's conclusions included the expectation that atmospheric CO₂ concentrations would double by 2090 according to the Exxon model, with a concomitant increase in average global temperature of 2.3 to 5.6 °F. Shaw compared his model's results with those of the EPA, the National Academy of Sciences and the Massachusetts Institute of Technology, indicating that Exxon's model predicted a greater lag than any of the other models, although its prediction of temperature rise was in the middle of the range of the four projections.⁵⁶

45. During the 1980s, many Defendants formed their own research units focused on climate modeling. API, including API's CO₂ Task Force, provided a forum for Defendants to share their research efforts and corroborate their findings related to anthropogenic greenhouse gas emissions.⁵⁷

46. During this time, Defendants' statements expressed an understanding of their obligation to consider and mitigate the externalities of the relentless promotion, marketing, and sale of their fossil fuel products. For example, in 1988, Richard Tucker, president of Mobil Oil, presented at the National Meeting of the American Institute of Chemical Engineers, the premier educational forum for chemical engineers, where he stated:

Humanity, which has created the industrial system that has transformed civilization, is also responsible for the environment, which is sometimes at risk due to unintended consequences of industrialization. . . . Maintain the health of

⁵⁶ Neela Banerjee, More Exxon Documents Show How Much It Knew About Climate 35 Years Ago, Inside Climate News (Dec. 1, 2015), <https://insideclimatenews.org/news/01122015/documents-exxons-early-co2-position-seniorexecutives-engage-and-warming-forecast>.

⁵⁷ Neela Banerjee, Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too, Inside Climate News (Dec. 22, 2015), <https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-aboutclimate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco/>.

this life support system is becoming a top priority. . . . [W]e should all be environmentalists.

The environmental compact requires action on many fronts . . . the ozone problem in the lower atmosphere, the ozone problem in the upper atmosphere, and the greenhouse effect, to name a few. . . . Our strategy must be to reduce pollution before it is generated, to prevent problems at their source.

Prevention means designing a new generation of fuels, lubricants, and chemicals. . . . Prevention means designing catalysts and processes that minimize or eliminate the production of unwanted byproducts. . . . Prevention on a global scale may even require a drastic reduction in our dependence on fossil fuels and a shift to safe nuclear, solar, and hydrogen, power. It may be possible (simply possible) for the energy industry to be so completely transformed that observers will declare it a new industry. . . . Brute force, low-tech responses, and money alone will not solve the challenges we face in the energy industry.⁵⁸

47. In 1987, Shell published an “internal report for corporations Royal Dutch/Shell Group” entitled “Air Pollution: An Oil Industry Perspective.” In this report, the company described that the greenhouse effect occurs “largely as a result of the burning of fossil fuels and deforestation.”⁵⁹ Shell also acknowledged the “concern that further increases in carbon dioxide levels could cause climate changes, in particular an increase in overall temperature, with significant environmental, social and economic consequences.”⁶⁰

48. In 1988, Shell’s Greenhouse Effect Working Group published a confidential internal report, “The Greenhouse Effect,” which acknowledged the anthropogenic nature of global warming: “Man-made carbon dioxide released and accumulated in the atmosphere is believed to warm the Earth through the so-called greenhouse effect.” The authors also noted that the burning of fossil fuels is the main driver of CO₂ accumulation and warned that warming “would create significant changes in sea level, ocean currents, precipitation patterns, regional temperature, and weather.” They further noted the potential for “direct operational consequences” of sea level rise on “offshore installations, coastal facilities and operations (e.g., platforms, ports, refineries, depots).”⁶¹

⁵⁸ Richard E. Tucker, High Tech Frontiers in the Energy Industry: The Challenge Ahead, AICHE National Meeting (Nov. 30, 1988), <https://hdl.handle.net/2027/pur1.32754074119482?urlappend=%3Bseq=528>.

⁵⁹ Shell Briefing Service, Air pollution: an oil Industry Perspective (1987), At 4, <https://www.documentcloud.org/documents/24359057-shell-briefing-service-air-pollution-an-oil-industryperspective-nr1-1987>.

⁶⁰ *Id.* at 5.

⁶¹ Shell Internationale Petroleum, Greenhouse Effect Working Group, The Greenhouse Effect (May 1988), <https://www.documentcloud.org/documents/4411090-Document3.html#document/p9/a411239>.



49. Similar to the early warnings from Exxon scientists, the Shell report noted that “by the time global warming is detectable, it may be too late to take effective countermeasures to reduce the effects or even stabilize the situation.” The authors stated that “the possible implications for the world are . . . so large that policy options need to be considered much earlier” and that research should “be directed more towards the analysis of policy and energy options than studies of what exactly we will be facing.”

50. In 1989, Esso Resources Canada (ExxonMobil) commissioned a report on the impacts of climate change on existing and proposed natural gas facilities in the Mackenzie River Valley and Delta, including extraction facilities in the Beaufort Sea and a pipeline crossing the Northwest Territory of Canada.⁶² It reported that “large areas of the Mackenzie Valley could be dramatically affected by climate change” and that “the biggest concern in Norman Wells [oil town in the Northwest Territories, Canada] should be changes in permafrost that are likely to occur under conditions of global warming.”⁶³ The report concluded that, in light of climate models showing a “general trend toward a warmer and wetter climate,” the operation of those facilities would be compromised by increased rainfall, rising air temperatures, changes in permafrost conditions, and, significantly, rising sea levels and erosion damage.⁶⁴ The authors recommended taking such eventualities into account in planning for future development and also warned that “a rise in sea level could cause further flooding and erosion damage on Richards island.”

51. Ken Croasdale, a senior ice researcher at Imperial Oil, a subsidiary of Exxon, told an audience of engineers in 1991 that greenhouse gases are increasing “because of the burning of fossil fuels. No one disputes this fact.”⁶⁵

52. The fossil fuel industry was at the forefront of carbon dioxide research for much of the second half of the 20th Century. It developed

⁶² See Stephen Lonergan & Kathy Young, An Assessment of the Effects of Climate Warming on Energy Developments in the Mackenzie River Valley and Delta, Canadian Arctic, 7 Energy Exploration & Exploitation 359–81 (1989).

⁶³ Id. at 369, 376.

⁶⁴ Id. at 360, 377–78.

⁶⁵ Ronald C. Kramer, Carbon Criminals, Climate Crimes 66 (1st ed. 2020).



innovative and cutting-edge technology, and worked with many of the best researchers in the field to produce exceptionally sophisticated studies and models.

53. Defendants also meticulously examined plausible scenarios if they did not act on their insider knowledge. For example, Shell assessed in a confidential internal planning document from 1989 the issue of “climate change: the greenhouse effect, global warming”, which the document identified as “the most important issue for the energy industry.”⁶⁶ The paper compared a scenario in which society “addresses the potential problem” to one in which it does not. Recognizing that “changing emission levels... and changing the atmospheric CO₂ concentration has been compared to changing a VLCC”, even “substantial efforts” by 2010 would have “hardly any impact on CO₂ concentration.” However, in later years the impacts are “strikingly different”; Early efforts “will not prevent the problem from arising, but ... could mitigate it.” The document outlined the consequences of not addressing the problem immediately:

These changes seem small, but they mask more dramatic temperature changes that would take place at temperate latitudes. There would be a more violent climate: more storms, more droughts, more deluges. The average sea level would rise by at least 30 cm. Agricultural patterns would change more dramatically. Something as simple as a moderate change in rainfall pattern alters ecosystems, and many species of trees, plants, animals, and insects would not be able to move or adapt.

However, the changes would have a greater impact on humans. In the past, man could respond with his feet. Nowadays there is nowhere to go because people are already there. Perhaps those in industrialized countries could cope with a rise in sea level (the Dutch examples), but for poor countries such defenses are not possible. The potential refugee problem... might be unprecedented. Africans would go to Europe, Chinese to the Soviet Union, Latinos to the United States, and Indonesians to Australia. Limits would count for little, overwhelmed by numbers. Conflicts would abound. Civilization could turn out to be somewhat fragile.⁶⁷

54. In another confidential internal planning document from 1989, Shell anticipated that “public and media pressures” to “adopt[] environmental programs” such as “much stricter targets for CO₂ emissions” could provoke “effective consumer responses” that “will lead to intense conflicts and unpredictable pressures on companies.”⁶⁸ The scenario envisioned that “[t]he worries about global warming and depletion will depress fossil fuel production their market share

⁶⁶ Shell, Scenarios 1989–2010: Challenge and Response (Oct. 1989), at 33, <https://www.documentcloud.org/documents/23735737-1989-oct-confidential-shell-group-planning-scenarios-1989-2010-challenge-and-response-disc-climate-refugees-and-shift-to-non-fossil-fuels>.

⁶⁷ *Id.* at 36.

⁶⁸ See Shell UK, UK Scenarios 1989 (Nov. 1989), at 31, 34, <https://embed.documentcloud.org/documents/24359062-snippets-of-confidential-shell-uk-november-1989-scenarios>



declining as renewables are actively promoted,” given that “[w]here there can be a real choice for the consumer, it will be a dominant force, especially where interest is heightened by obvious environmental impact.”⁶⁹

55. In yet another scenario published in a 1998 internal report, Shell paints a disturbingly prescient picture:

In 2010, a series of violent storms causes extensive damage to the eastern coast of the U.S. Although it is not clear whether the storms are caused by climate change, people are not willing to take further chances. The insurance industry refuses to accept liability, setting off a fierce debate over who is liable: the insurance industry or the government. After all, two successive IPCC reports since 1993 have reinforced the human connection to climate change . . . Following the storms, a coalition of environmental NGOs brings a class-action suit against the US government and fossil-fuel companies on the grounds of neglecting what scientists (including their own) have been saying for years: that something must be done. A social reaction to the use of fossil fuels grows, and individuals become ‘vigilante environmentalists’ in the same way, a generation earlier, they had become fiercely anti-tobacco. Direct-action campaigns against companies escalate. Young consumers, especially, demand action.⁷⁰

56. Fossil fuel companies didn’t just consider the impacts of climate change in scenarios. In the mid-1990s, ExxonMobil, Shell, and Imperial Oil (ExxonMobil) jointly undertook the Sable Offshore Energy Project in Nova Scotia. The project’s own Environmental Impact Statement stated: “The impact of a sea level rise due to global warming may be particularly significant in Nova Scotia. Long-term tide gauge records at various locations along the coast of Nova Scotia have shown that sea levels have risen over the past century. . . . For the design of coastal and offshore structures, an estimated rise in water level, due to global warming, of 0.5 m [1.64 feet] can be assumed over the proposed life of the project (25 years).”⁷¹

57. Climate change research conducted by Defendants and their industry associations frequently recognized uncertainties in their climate models. However, those uncertainties were simply about the magnitude and timing of climate impacts resulting from fossil fuel consumption, not about any significant changes occurring. Defendants’ researchers and the researchers at their industry associations had little doubt that

⁶⁹ Id. at 34.
⁷⁰ Royal Dutch/Shell Group, Group Scenarios 1998–2020 115, 122 (1998), <http://www.documentcloud.org/documents/4430277-27-1-Compiled.html>.
⁷¹ ExxonMobil, Sable Project Development Plan, vol. 3, 4-77, <http://soep.com/about-the-project/development-plan-application>.



58. Despite the overwhelming information about the threats to people and the planet posed by the continued and relentless use of their fossil fuel products, Defendants failed to act as they reasonably should have done to mitigate or avoid those terrible adverse impacts. Instead, Defendants took the position, as described below, that they had a license to continue the unlimited pursuit of profit from those products. This position was an abdication of Defendants' responsibility to consumers and the public, including the Commonwealth, to act on their unique knowledge of the reasonably foreseeable dangers of the relentless production and consumption of their fossil fuel products.

59. By 1988, Defendants had amassed a compelling body of knowledge about the role of anthropogenic greenhouse gases, specifically those emitted by the normal use of fossil fuel products, as a cause of global warming and its cascading impacts, including alterations of the hydrological cycle, extreme precipitation, drought, heat waves and associated consequences for human communities and the environment. Upon learning that their products were causing global climate change and dire effects on the planet, Defendants faced the decision of whether or not to take action to limit the harms that fossil fuel products were causing and would continue to cause to Earth's inhabitants, including the people of Puerto Rico.

51

I, Juan E. Segarra, USCCI #06-067/translator, certify that the foregoing is a true and accurate translation, to the best of my abilities, of the document in Spanish which I have seen.

61. Several key events during the period between 1988 and 1992 appear to have prompted Defendants to shift their tactics from general research and internal discussion on climate change to a public campaign aimed at misleading consumers and the public, including those in Puerto Rico. These include:

b. On July 28, 1988, Senator Robert Stafford and four bipartisan co-sponsors introduced S. 2666, “Global Environmental Protection Act,” to regulate CO₂ and other greenhouse gases. In the following ten weeks, four other bipartisan bills were introduced to significantly reduce CO₂ pollution and, in August, U.S. presidential candidate George H.W. Bush promised that his presidency would combat the greenhouse effect with “the White House effect.”⁷³ Political will in the United States to reduce anthropogenic greenhouse gas emissions and mitigate harms associated with Defendants’ fossil fuel products was gaining momentum.

c. In December 1988, the United Nations formed the Intergovernmental Panel on Climate Change (“IPCC”), a scientific panel dedicated to providing the world’s governments with an objective scientific analysis of climate change and its environmental, political, and economic impacts.

⁷³ The White House and the Greenhouse, N.Y. Times (May 9, 1989), <http://www.nytimes.com/1989/05/09/opinion/the-white-house-and-the-greenhouse.html>.

d. In 1990, the IPCC published its First Assessment Report on anthropogenic climate change,⁷⁴ which concluded that (1) “there is a natural greenhouse effect that already keeps the Earth warmer than it would otherwise be,” and (2) that

Emissions resulting from human activities are substantially increasing atmospheric concentrations of the greenhouse gases carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will intensify the greenhouse effect, causing, on average, additional warming of the Earth’s surface. The main greenhouse gas, water vapor, will increase in response to global warming and intensify it further.⁷⁵

The IPCC reconfirmed these findings in a 1992 supplement to the First Assessment Report.⁷⁶

e. The United Nations began preparing for the 1992 Earth Summit in Rio de Janeiro, Brazil, a major, newsworthy gathering of 172 world governments, of which 116 sent their heads of state. The Summit resulted in the United Nations Framework Convention on Climate Change (“UNFCCC”), an international environmental treaty that provides protocols for future negotiations aimed at “stabilizing greenhouse gas concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system.”⁷⁷

62. Those global events marked a shift in the public debate on climate change and the initiation of international efforts to curb anthropogenic greenhouse gas emissions, developments that had serious implications and would have diminished the profitability of Defendants’ fossil fuel products.

63. Instead of collaborating with the international community by acting to prevent, or at least diminish, the contributions of fossil fuel products to global warming and its impacts, including sea level rise, alterations to the hydrological cycle, and the associated consequences for Puerto Rico and other communities, Defendants embarked on a decades-long campaign designed to perpetuate and maximize continued reliance on fossil fuel products.

⁷⁴ See IPCC, Reports, [ipcc.ch/reports](https://www.ipcc.ch/reports).

⁷⁵ IPCC, Climate Change: The IPCC Scientific Assessment xi (1990), <https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments>.

⁷⁶ IPCC, 1992 IPCC Supplement to the First Assessment Report (1992), <https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments>.

⁷⁷ United Nations, United Nations Framework Convention on Climate Change art. 2 (1992), <https://unfccc.int/resource/docs/convkp/conveng.pdf>.



64. Defendants' campaign, which focused on concealing, debunking, and/or misrepresenting information that tended to support restricting the consumption (and thus declining demand) of Defendants' fossil fuel products and transitioning society to a lower carbon footprint and future, took several forms. The campaign allowed Defendants to accelerate their business practice of exploiting fossil fuel reserves while also externalizing the social and environmental costs of their fossil fuel products. These activities directly contradicted Defendants' own prior recognition that the science of anthropogenic climate change was clear and that measures were needed to avoid or mitigate dire consequences for the planet and communities such as those in the Commonwealth.

65. Defendants, alone and jointly through industry and front groups such as API, the Information Council for the Environment ("ICE"), and the Global Climate Coalition ("GCC"), financed, conceived, planned, and carried out a sustained and widespread campaign of denial and disinformation about the existence of climate change and the contribution of their products to it. The campaign included a long-term pattern of direct misrepresentations and material omissions to consumers, as well as a plan to indirectly influence consumers by affecting public opinion by disseminating misleading research to the press, government, and academia. Although Defendants were competitors in the marketplace, they combined and collaborated with each other and API in this public campaign to divert and suppress public knowledge in order to increase sales and protect profits. The effort included promoting dangerous fossil fuel products through advertising campaigns that failed to warn of the existential risks associated with the use of those products and were designed to influence consumers to continue using Defendants' fossil fuel products regardless of the harm those products caused to communities and the environment.

66. For example, in 1988, Joseph Carlson, Exxon's public affairs manager, claimed in an internal memo that Exxon "is providing leadership through API in developing the oil industry's position" on "the greenhouse effect."⁷⁸ He then went on to describe the "Exxon Position," which included two important messaging principles, among

⁷⁸ Memorandum from Joseph M. Carlson The Greenhouse Effect (Aug. 3, 1988), <https://assets.documentcloud.org/documents/3024180/1998-Exxon-Memo-on-the-Greenhouse-Effect.pdf>.



others: (1) “[e]mphasize the uncertainty in scientific conclusions about the potential increase of the Greenhouse Effect”; and (2) “[r]esist the exaggeration and sensationalization [sic] of the potential greenhouse effect that could lead to noneconomic development of non-fossil fuel resources”⁷⁹

67. Reflecting on his time as an Exxon consultant in the 1980s, Professor Martin Hoffert, a former physicist at New York University who researched climate change, expressed regret over Exxon’s “climate science denial program campaign” in his sworn testimony before Congress:

[O]ur research [at Exxon] was consistent with the findings of the United Nations Intergovernmental Panel on Climate Change on the human impacts of burning fossil fuels, which is that they are having an increasingly discernible influence on Earth’s climate. . . . If anything, adverse climate change due to elevated CO₂ levels is proceeding faster than the average of previous IPCC mild projections and is entirely consistent with what we knew in the early 1980s at Exxon. . . . I was very distressed by the climate science denial program campaign that Exxon’s front office launched around the time I stopped working as a consultant (but not a contributor) for Exxon. The advertisements that Exxon ran in major newspapers raising questions about climate change contradicted the scientific work we had done and continue to do. Exxon was publicly promoting views that its own scientists knew were wrong, and we knew that because we were the main group working on this.⁸⁰

68. A 1994 Shell report entitled “The Enhanced Greenhouse Effect: A Review of the Scientific Aspects” by Royal Dutch Shell’s environmental adviser, Peter Langcake, contrasts sharply with the company’s 1988 report on the same subject. Whereas the authors previously recommended considering policy solutions from the outset, Langcake warned of the “potentially dramatic economic effects of ill-advised policy measures.” While the report acknowledged the IPCC’s findings as the prevailing view, Langcake still emphasized scientific uncertainty, noting, for example, that “the postulated link between any observed temperature increase and human activities must be seen in relation to natural variability, which is still largely unpredictable.”⁸¹

⁷⁹ Ibid.

⁸⁰ Examining the Oil Industry’s Efforts to Suppress the Truth About Climate Change, Hearing Before the Subcomm. on Civil Rights and Civil Liberties of the Comm. on Oversight and Reform, 116th Cong. 7-8 (Oct. 23, 2019) Statement of Martin Hoffert, former Exxon consultant, Professor Emeritus of Physics at New York University), <https://oversight.house.gov/legislation/hearings/examining-the-oil-industry-s-efforts-to-suppress-the-truthabout-climate-change>.

⁸¹ P. Langcake, Shell Internationale Petroleum, The Enhanced Greenhouse Effect: A Review of the Scientific Aspects (Dec. 1994), <https://www.documentcloud.org/documents/4411099-Documents11.html#document/p15/a411511>.



69. In line with this communication strategy, Shell had issued a publication in 1992 for wide external distribution that purported to describe the “basic scientific facts” of the “potential increased greenhouse effect.”⁸² This paper downplayed the scientific consensus (which Shell acknowledged internally) by referring to the “relatively few established scientific fundamentals” regarding the causes of climate change.⁸³ It also misleadingly suggested that a “particular cause” of global warming was “difficult” to identify, even though Shell had identified the use of its products as a significant contributor to the greenhouse effect in the previous decade.⁸⁴ For example, in 1985, an environmental scientist at Shell in the United Kingdom published a paper exposing the scientific fact that “[t]he burning of fossil fuels that have taken millions of years to form has effectively altered the balance [of the carbon cycle], leading to an increase in CO₂ in the atmosphere.”⁸⁵

70. In 1991, ICE, whose members included affiliates, predecessors, and/or subsidiaries of Defendants, launched a national campaign of scientific denial of climate change with full-page newspaper ads, radio commercials, a public relations tour calendar, “mailers,” and research tools to measure the success of the campaign. The campaign’s strategies included “repositioning global warming as a theory (not a fact).” Their target audience included older men with less education who are “predisposed to favor the ICE agenda, and who are likely to be even more supportive of that agenda after exposure to new information.”⁸⁶

71. One goal of ICE’s advertising campaign was to change public opinion and consumer perceptions of climate risk. A memorandum from Richard Lawson, president of the National Coal Association, the predecessor of the National Mining Association, noted that “public opinion polls reveal that 60% of the

⁸² Jan Kuyper, Shell Group Planning, Business Environment Occasional Paper, Potential Augmented Greenhouse Effect: Basic Scientific Facts (Sept. 1992), at 3, <https://www.documentcloud.org/documents/24359060-1992internal-shell-group-planning-report-potential-augmented-greenhouse-effect-and-depletion-of-the-ozone-layer>

⁸³ Id. at 5.

⁸⁴ Ibid.

⁸⁵ T.G. Wilkinson, Why and How to Control Energy Pollution: Can Harmonisation Work?, 8 Conservation & Recycling 7, 19 (1985), <https://www.documentcloud.org/documents/24359067-1985-03-why-and-how-to-controlenergy-pollution-by-tg-wilkinson-shell>.

⁸⁶ Union of Concerned Scientists, Deception Dossier #5: Coal’s “Information Council on the Environment” Sham (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.



the American people already believe that global warming is a serious environmental problem. Our industry cannot be left out of this debate.”⁸⁷

72. The following images are examples of ICE-funded print ads that challenge the validity of climate science and aim to obscure the scientific consensus on anthropogenic climate change.⁸⁸



Figure 8: Environmental Information Council Ads

73. In 1996, Exxon issued a publication called “Global Warming: Who’s Right? Data on a debate that has generated more questions than answers.” In the preface to the publication, Exxon CEO Lee Raymond incorrectly stated that “drastic action does not need to be taken immediately, as many scientists agree that there is ample time to better understand the climate system.” The publication described the greenhouse effect as “unquestionably real and definitely a good thing,” ignoring the dire consequences that would result from the influence of increasing CO₂ concentration on Earth’s climate. Instead, he characterized the greenhouse effect simply as “what makes the Earth’s atmosphere habitable.” Directly contradicting Exxon’s own insider knowledge and peer-reviewed science, the publication attributed the temperature increase since the late 19th century to “natural fluctuations occurring over long periods of time” rather than to anthropogenic emissions that Exxon itself and other scientists had confirmed were responsible. The publication also

⁸⁷ Naomi Oreskes, My Facts Are Better Than Your Facts: Spreading Good News About Global Warming (2010), in Peter Howlett et al., How Well Do Facts Travel?: The Dissemination of Reliable Knowledge 136–66 (Cambridge University Press, 2011).

⁸⁸ Union of Concerned Scientists, Deception Dossier #5: Coal’s “Information Council on the Environment” Sham at 47-49 (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.

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falsely questioned computer models that projected the future impacts of continued consumption of fossil fuel products, including those developed by Exxon's own employees, as having "turned out to be inaccurate." The publication contradicted the numerous reports prepared and distributed among Exxon and API staff, stating that "indications are that a warmer world would be much more benign than many imagine... moderate warming would reduce death rates in the United States, so a slightly warmer climate would be healthier." Raymond concluded his preface by attacking advocates of limiting the use of his company's fossil fuel products, accusing them of "relying on bad science, faulty logic, or unrealistic assumptions," despite the important role Exxon's own scientists had played in compiling those same scientific foundations.⁸⁹

74. In a speech at the World Petroleum Congress in Beijing in 1997, at which many Defendants were present, Exxon's CEO, Lee Raymond, reiterated those views. This time, he presented a false dichotomy between stable energy markets and the reduction of the marketing, promotion, and sale of fossil fuel products that Defendants knew were dangerous. He said:

Some people argue that we should drastically reduce our use of fossil fuels for environmental reasons. . . . My belief [is] that such proposals are neither prudent nor practical. With no economic alternatives available on the horizon, fossil fuels will continue to supply most of the world's and this region's energy for the foreseeable future.

Governments must also provide a stable investment climate . . . They should avoid the temptation to intervene in energy markets in ways that give one competitor an advantage over another or one fuel over another.

We should also keep in mind that most of the greenhouse effect comes from natural sources . . . Jumping to radically cut this small slice of the greenhouse pie on the premise that it will affect the climate defies common sense and lacks foundation in our current understanding of the climate system.

Let's agree that there are a lot of things we don't really know about how the climate will change in the 21st Century and beyond. . . . It is highly unlikely that temperature in the middle of the next century will be significantly affected, whether policies are implemented now or 20 years from now. It is bad public policy to impose very costly regulations and restrictions when their necessity has not yet been demonstrated.⁹⁰

⁸⁹ Exxon Corp. Global Warming: Who's Right? (1996), <https://www.documentcloud.org/documents/2805542-Exxon-Global-Warming-Whos-Right.html>.

⁹⁰ Lee R. Raymond, Chairman and Chief Executive Officer, Exxon Corp., Address at the World Petroleum Congress (Oct. 13, 1997), <https://assets.documentcloud.org/documents/2840902/1997-Lee-Raymond-Speech-at-China-World-Petroleum.pdf>.



75. Imperial Oil (ExxonMobil) CEO Robert Peterson falsely denied the connection established between Defendants' fossil fuel products and anthropogenic climate change in the summer 1998 Imperial Oil Review magazine, "A Cleaner Canada":

[T]his issue [referring to climate change] has absolutely nothing to do with pollution and air quality. Carbon dioxide is not a pollutant but an essential ingredient of life on this planet. . . . [T]he question of whether or not the capture of 'greenhouse' gases will cause a warming of the planet . . . has no connection with our daily weather. There is absolutely no agreement among climatologists on whether or not the planet is warming, or, if so, whether the warming is the result of man-made factors or natural variations in climate. . . . I feel very confident in saying that the view that burning fossil fuels will cause global climate change remains an unproven hypothesis.⁹¹

76. Mobil (ExxonMobil) paid for a series of "advertorials," ads placed in the editorial section of The New York Times and intended to look like editorials rather than paid ads. Many of those advertorials communicated doubts about the reality and severity of human-caused climate change, even as industry scientists simultaneously concluded that climate change was real, severe, and caused by human activity. The ads addressed various aspects of the public debate on climate change and sought to undermine justifications for addressing greenhouse gas emissions as unsettled science. The 1997 advertorial then⁹² argued that economic analysis of emissions restrictions was flawed and inconclusive and, thus, a justification for delaying action on climate change.

⁹¹ Robert Peterson, A Cleaner Canada in Imperial Oil Review (1998), <https://www.desmogblog.com/sites/beta.desmogblog.com/files/A%20Cleaner%20Canada%20Imperial%20Oil.pdf>.

⁹² Mobil, When Facts Don't Square with the Theory, Throw Out the Facts, N.Y. Times A31 (Aug. 14, 1997), <https://www.documentcloud.org/documents/705550-mob-nyt-1997-aug-14-whenfactsdonsquare.html>.



When the facts do not agree with the theory, they must be discarded

That seems to characterize the administration's attitude on two of its own studies which show that international efforts to curb global warming could spark a big run-up in energy prices.

For months, the administration—playing its cards close to the vest—has promised to provide details of the emissions reduction plan it will put on the table at the climate change meeting in Kyoto, Japan, late this year. It also promised to evaluate the economics of that policy and measure its impact. Those results are important because the proposals submitted by other countries thus far would be disruptive and costly for the U.S. economy.

Yet, when the results from its own economic models were finally generated, the administration started distancing itself from the findings and models that produced them. The administration's top economic advisor said that the economic models can't provide a "definitive answer" on the impact of controlling emissions. The effort, she said, is "futile." At best, the models can only provide a "range of potential impacts."

Frankly, we are puzzled. The White House has promised to lay the economic facts before the public. Yet, the administration's top advisor said such an analysis won't be based on models and it will "preclude... detailed numbers." If you don't provide numbers and don't rely on models, what kind of rigorous economic examination rigorous can Congress and the public expect?

We are also puzzled by ambivalence over models. The administration downplays the utility of economic models to forecast cost impacts 10-15 years from now, yet its negotiators accept as gospel the 50-100-year predictions of global warming that have been generated by climate models-- many of which were criticized as seriously defective.

The second study, conducted by Argonne National Laboratory under a contract with the Department of Energy, examined what would

happen if the U.S. had to commit to higher energy prices under the emission reduction plans that several nations had advanced last year. Such increases, the report concluded, would result in "significant reductions in output and employment" in six industries— aluminum, cement, chemical, paper and pulp paper, petroleum refining and steel.

Hit hardest, the study noted, would be the chemical industry, with estimates that up to 30 percent of U.S. chemical manufacturing capacity would move offshore to developing countries. Job losses could amount to about 200,000 in that industry, with another 100,000 in the steel sector. And despite the substantial loss of U.S. jobs and manufacturing capacity, the net emissions reduction could be insignificant since countries in development will not be bound by the emission targets of a global warming treaty.

Downplaying Argonne's, the Energy Department noted that the study used outdated energy prices (mid-1996), didn't reflect the gains that would be come from international emissions trading and failed to factor in the benefits of accelerated developments in energy efficiency and low-carbon technologies.

What it failed to mention is just what these new technologies are and when we can expect their benefits to kick in. As for emissions trading, many economists have theorized about the role they could play in reducing emissions, but few have grappled with the practicality of implementing and policing such a scheme.

We applaud the objectives that the U.S. wants to achieve in these upcoming negotiations—namely, that the final agreement be "flexible, profitable, realistic, achievable and ultimately global in scope." But, until we see the details of the administration's policy, we are concerned that plans are being developed in the absence of rigorous economic analysis. Too much is at stake to simply ignore facts that don't square agree with preconceived theories.

Mobil® The energy
to make a difference™

Figure 9: Mobil advertorial from 1997

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77. Many other advertorials by Exxon and Mobil characterized falsely or misleadingly characterized the state of climate science research to readers of The New York Times op-ed page.

A sample of these false statements include:

- “We don’t know enough about the factors that affect global warming and the degree to which, if any, man-made emissions (i.e., carbon dioxide) contribute to increases in the Earth’s temperature.”⁹³
- “Greenhouse gas emissions, which have a warming effect, are offset by other combustion product, particulates, which cause cooling.”⁹⁴
- “Even after two decades of progress, climatologists are still unsure how (or even if) the accumulation of human-caused greenhouse gases is related to global warming. It could be at least a decade before climate models are able to unambiguously link greenhouse warming to human actions. There are still important scientific answers to be found in the future ahead.”⁹⁵
- “[I]t is impossible for scientists to attribute the recent small increases in surface temperature to human causes.”⁹⁶

78. A quantitative analysis of ExxonMobil’s climate communications between 1989 and 2004 found that while 83% of the company’s peer-reviewed articles and 80% of its internal documents acknowledged the reality and human origins of

⁹³ Mobil, Climate Change: A Prudent Approach, in N.Y. Times (Nov. 13, 1997), <https://www.documentcloud.org/documents/705548-mob-nyt-1997-11-13-climateprudentapproach.html>.

⁹⁴ Mobil Less Heat, More Light on Climate Change (July 18, 1996), <https://www.documentcloud.org/documents/705544-mob-nyt-1996-jul-18-lessheatmorelight.html>.

⁹⁵ Mobil Climate Change: Where We Eat Out, in N.Y. Times (Nov. 20, 1997), <https://www.documentcloud.org/documents/705549-mob-nyt-1997-11-20-ccwherewecomeout.html>.

⁹⁶ ExxonMobil, Unsettled Science (Mar. 23, 2000), reproduced in <https://www.theguardian.com/environment/2021/nov/18/the-forgotten-oil-ads-that-told-us-climate-change-wasnothing>.



climate change, 81% of its advertorials communicated doubts about these conclusions.⁹⁷ ExxonMobil's tendency to contradict its own peer-reviewed research in statements intended for non-professional audiences was repeated year after year. Based on this "statistically significant" discrepancy between internal and external communications, the authors concluded that "ExxonMobil misled the public."⁹⁸

79. Defendants, individually and through the IPA, other trade associations, and various front groups, mounted a deceptive public campaign to continue to promote and improperly market their fossil fuel products, despite their own knowledge and growing national and international scientific consensus on the dangers of continuing to do so.

80. One of the key organizations formed by Defendants to coordinate the fossil fuel industry's response to the growing global awareness of climate change was the International Petroleum Industry Environmental Conservation Association (or "IPIECA"). In 1987, IPIECA formed a "Working Group on Global Climate Change" chaired by Duane LeVine, Exxon's director of science and strategic development. The working group also included Brian Flannery of Exxon, Leonard Bernstein of Mobil, Terry Yosie of API and representatives from BP, Shell and Texaco (Chevron). In 1990, the Working Group sent a strategic memorandum created by LeVine to hundreds of oil companies around the world, including Defendants. This memorandum explained that, in order to prevent a

⁹⁷ Geoffrey Supran & Naomi Oreskes, Assessing ExxonMobil's Climate Change Communications (1977–2014), 12 Envtl. Research Letters, IOP Publishing Ltd. 12 (2017), <https://iopscience.iop.org/article/10.1088/17489326/aa815f/pdf>.

⁹⁸ Ibid.



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global shift away from burning fossil fuels for energy, industry should emphasize uncertainties in climate science, call for more research, and promote industry-friendly policies that would leave the fossil fuel business intact.⁹⁹

81. The Global Climate Coalition (“GCC”), on behalf of Defendants and other fossil fuel companies, also funded deceptive advertising campaigns and distributed misleading material to generate public uncertainty around the climate debate, seeking to inflate the fossil fuel market.¹⁰⁰ Created in 1989, the GCC’s founding members included Exxon, Shell, Phillips Petroleum Company (ConocoPhillips), and the API. BP and Chevron also participated as members of the GCC. Its position on climate change contradicted decades of internal scientific reports from its members by claiming that natural trends, and not human combustion of fossil fuels, were responsible for rising global temperatures:

The GCC believes that the preponderance of the evidence indicates that most, if not all, of the observed warming is part of [a] natural warming trend that began approximately 400 years ago. If there is an anthropogenic component to this observed warming, the GCC believes it must be very small and must be superimposed on a much larger natural warming trend.¹⁰¹

82. The GCC’s promotion of an open skepticism about climate change also contravened its internal assessment that such theories lacked scientific support. Despite an internal primer acknowledging that several “contrarian theories” (i.e., climate change skepticism) do not “offer convincing arguments against the conventional model

⁹⁹ Benjamin A. Franta, Big Carbon’s Strategic Response to Global Warming, 1950-2020 140 (2022), <https://purl.stanford.edu/hq437ph9153>.

¹⁰⁰ Ibid.

¹⁰¹ Global Climate Coalition, Global Climate Coalition: An Overview 2 (Nov. 1996), <http://www.climatefiles.com/denial-groups/global-climatecoalition-collection/1996-global-climate-coalitionoverview/>.



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of greenhouse gas emission-induced climate change,” the GCC excluded this section from the published version of the background report¹⁰² and instead funded and promoted some of those same contrarian theories. Between 1989 and 1998, the GCC spent \$13 million on advertising as part of a campaign to obfuscate the public’s understanding of climate science and undermine their trust in climate scientists.¹⁰³

83. For example, in a 1994 report, the GCC stated that “observations have not yet confirmed evidence of global warming that can be attributed to human activities,” that “[t]he claim that serious impacts of climate change have occurred or will occur in the future simply has not been proven,” and thus “there is no basis for designing effective policy actions that eliminate the potential for climate change.”¹⁰⁴ In 1995, the GCC published a pamphlet entitled “Climate Change: Your Passport to the Facts,” in which it stated: “While many warnings have reached the popular press about the consequences of a possible human-caused warming of the Earth’s atmosphere during the next 100 years, there remains no scientific evidence that such dangerous warming will actually occur.”¹⁰⁵

84. In 1997, William O’Keefe, president of the GCC and executive vice president of API, falsely wrote in a Washington Post op-ed : “[C]limate scientists don’t say that burning oil,

¹⁰² Memorandum from Gregory J. Dana, Assoc. of Int’l Auto. Mfrs., to AIAM Technical Committee, Global Climate Coalition (GCC) - Primer on Climate Change Science - Final Draft (Jan. 18, 1996), <http://www.webcitation.org/6FyqHawb9>.

¹⁰³ Wendy E. Franz, Kennedy School of Government, Harvard University, Science, Skeptics and Non-State Actors in the Greenhouse, ENRP Discussion Paper E-98-18 13 (Sept. 1998), <https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20NonState%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf>.

¹⁰⁴ GCC, Issues and Options: Potential Global Climate Change, Climate Files (1994), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1994-potential-global-climatechange-issues>.

¹⁰⁵ GCC, Climate Change: Your Passport to the Facts, Climate Files (1995), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1995-climate-change-facts-passport>.

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gas, and coal is constantly warming the earth.”¹⁰⁶ This statement contradicted the established scientific consensus as well as Defendants’ own knowledge. However, Defendants did nothing to correct the public record and instead continued to fund the GCC’s anti-science climate skepticism.

85. In addition to publicly disseminating false and misleading information from the scientific consensus on climate, the GCC also sought to undermine the credibility of climate science from within the IPCC. After becoming a reviewer of the IPCC’s Second Assessment Report in 1996, the GCC used its position to accuse the lead author of a key chapter of the Report of modifying its conclusions. The GCC stated that the author, climatologist Ben Santer, had engaged in a “scientific clean-up” that “underestimated uncertainties about the causes and effects of climate change . . . to increase the apparent scientific support for the attribution of climate change to human activities.”¹⁰⁷ The GCC also arranged to spread the accusation among lawmakers, journalists, editors of scientific journals and even the opinion page of the Wall Street Journal.¹⁰⁸ This effort “was widely perceived as an attempt by the GCC to undermine the credibility of the IPCC.”¹⁰⁹

86. In the late 1990s, Defendants stopped openly denying anthropogenic warming and went on to peddle a more subtle form of skepticism about climate change. Defendants were alarmed by the huge legal complaints that Big Tobacco now faced as a result of decades spent publicly denying the health risks from smoking cigarettes, and a Shell employee explained that the

¹⁰⁶ William O’Keefe, To Climate Policy, in The Washington Post (July 5, 1997), <https://www.washingtonpost.com/archive/opinions/1997/07/05/a-climate-policy/6a11899a-c020-4d59-a185b0e7eebf19cc/>.

¹⁰⁷ Franz, Science, Skeptics and Non-State Actors in the Greenhouse at 14.

¹⁰⁸ Naomi Oreskes & Erik Conway, Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming, New York: Bloomsbury Press 205–13 (2011). See also S. Fred Singer, Climate Change and Consensus, Science vol. 271, no. 5249 (Feb. 2, 1996); Frederick Seitz, A Major Deception on ‘Global Warming’, Wall Street Journal (June 12, 1996).

¹⁰⁹ Franz, Science, Skeptics, and Non-State Actors in the Greenhouse at 15.



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company “didn’t want to fall into the same trap as the tobacco companies” who have been caught up in all their lies.”¹¹⁰ Defendants began to change their communication strategy, claiming that they had embraced climate science from the beginning.¹¹¹ Several large fossil fuel companies, including BP and Shell, left the GCC (although all Defendants remained members of API).¹¹² At the time, Defendants publicly claimed to accept the reality of anthropogenic climate change while insisting that the costs of climate action were unacceptably high in light of the as-yet-unresolved uncertainties in climate science, especially around the severity and timeframe of future climate impacts. Reflecting this new strategy, API Executive Vice President (and GCC spokesperson) William O’Keefe announced in November 1998 that “we are committed to being part of the solution to climate risk and to actively participating in the debate to forge clear and defensible policy.” “[T]he debate is not about action or inaction,” O’Keefe wrote, “but what set of actions is consistent with our state of our knowledge and economic well-being.”¹¹³ Rather than publicly denying the need to address climate change, Defendants’ new communications strategy sought to prevent policy actions that could decrease the consumption of fossil fuel products.

87. Despite their change in public attitude, Defendants continued to surreptitiously organize and fund programs designed to mislead the public about the weight and veracity of the scientific consensus on climate. In 1998, API convened

¹¹⁰ Nathaniel Rich, Losing Earth: A Recent History, London: Picador 186 (2020).

¹¹¹ Franta, Big Carbon’s Strategic Response to Global Warming, 1950-2020, at 170.

¹¹² Id. at 177.

¹¹³ API: U.S. oil industry recognizes climate change risk, Oil & Gas Journal 28 (Nov. 2, 1998).



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a Global Climate Science Communications Team (“GCSCT”), whose members included Exxon’s senior environmental lobbyist, an API public relations representative, and representatives from Chevron. There were no scientists on the “Global Climate Science Communications Team.” Steve Milloy (a key player in the tobacco industry’s deception campaign) and his organization, The Advancement of Sound Science Coalition (TASSC), were founding members of the GCSCT. TASSC was a phony citizen group created by the tobacco industry to sow uncertainty by debunking the scientific link between exposure to second-hand smoke and rising rates of cancer and heart disease. Philip Morris had launched TASSC on the advice of its public relations firm, which warned it that the tobacco company itself would not be a credible voice on the issue of smoking and public health. TASSC, through API and with the approval of Defendants, also became a front group for the fossil fuel industry, using the same tactics it had perfected while operating on behalf of tobacco companies to sow doubt about climate science. While TASSC falsely posed as a grassroots group of concerned citizens, it was funded by Defendants. For example, between 2000 and 2004, Exxon donated \$50,000 to Milloy’s Sound Advancement Science Center; and an additional \$60,000 for the Free Enterprise Education Institute and \$50,000 for the Free Enterprise Action Institute, both registered at Milloy’s own address.¹¹⁴ The GCSCT represented a continuation of Defendants’ concerted actions to sow doubt and confusion about climate change in order to advance Defendants’ business interests.

¹¹⁴ Union of Concerned Scientists, Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big Tobacco’s Tactics to Manufacture Uncertainty on Climate Science (July 16, 2007), <https://www.ucsusa.org/resources/smoke-mirrors-hot-air>.



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88. Beginning in 1998, the GCSCT continued Defendants' efforts to mislead the public about the dangers of fossil fuel use by drafting a plan to convince the public that the scientific basis for climate change was in doubt. The multibillion-dollar, multi-year plan, among other elements, sought to: (a) "develop and implement a national media relations program to inform the media about uncertainties in climate science to generate national, regional, and local media coverage of scientific uncertainties"; (b) "[c]reate a global climate science information kit for the media that includes peer-reviewed articles that undermine the 'conventional wisdom' on climate science"; (c) "[p]roduce . . . a constant stream of opinion columns"; and (d) "develop and implement a direct outreach program to inform and educate members of Congress... and school teachers/students about uncertainties in climate science"¹¹⁵ to ensure a continuous and unhindered market for their fossil fuel products.

89. Exxon, Chevron, and the API led and contributed to the development of the plan, which clearly laid out the criteria by which the contributors would know when their efforts to raise doubts had been successful. "Victory," they wrote, "will be achieved when ... average citizens 'understand' (recognize) uncertainties in climate science" and "the recognition of uncertainties becomes part of the 'conventional wisdom'."¹¹⁶ In other words, the scheme was part of Defendants' goal to use disinformation to sow doubt about the reality of climate change in an effort to maintain consumer demand for their fossil fuel products and their large profits.

¹¹⁵ Email from Joe Walker to Global Climate Science Team, Draft Global Climate Science Communications Plan (Apr. 3, 1998), <https://assets.documentcloud.org/documents/784572/api-global-climate-science-communicationsplan.pdf>.

¹¹⁶ Ibid.



90. To further the strategies described in this memorandum, Defendants made misleading statements about climate change, the relationship between climate change and their fossil fuel products, and the urgency of the problem. Defendants made these statements in public forums and in advertisements published in newspapers and other media outlets of substantial circulation in Puerto Rico, including in national publications such as The New York Times, the Wall Street Journal, and the Washington Post.

91. Phillip Cooney, a lawyer for API from 1996 to 2001, testified at a congressional hearing in 2007 that it was “typical” for API to fund think tanks and advocacy groups that downplayed the role of fossil fuels in climate change. Among the groups to which API provided funding were the Heartland Institute, the Institute for Competitive Business, and the American Council on Capital Formation, each of which published publications challenging the scientific consensus that fossil fuels were causing climate change and opposing Defendants’ restrictions on extraction and production, and sale of fossil fuels.¹¹⁷

92. Another key strategy in Defendants’ efforts to discredit the scientific consensus on climate change and API was to fund scientists who, while accredited, had fringe opinions that became even more questionable given the funding sources for their research. Those scientists obtained some or all of their research budget from Defendants directly or through Defendant-funded organizations such as API,¹¹⁸ but frequently failed to disclose it to their

¹¹⁷ DeSmog, Competitive Enterprise Institute, <https://www.desmog.com/competitive-enterprise-institute/>; DeSmog, Heartland Institute, <https://www.desmog.com/heartland-institute/>; DeSmog, American Council for Capital Formation, <https://www.desmog.com/american-council-for-capital-formation/>.

¹¹⁸ E.g., Willie Soon & Sallie Baliunas, Proxy Climatic and Environmental Changes of the Past 1000 Years, 23 Climate Rsch. 88, 105 (Jan. 31, 2003), <http://www.int-res.com/articles/cr2003/23/c023p089.pdf>.



fossil fuel industry underwriters.¹¹⁹ At least one of those scientists, Dr. Wei-Hock Soon, contractually agreed to allow donors to review their research before publication, and his hosting institution agreed not to disclose the funding agreement without prior permission from their fossil fuel donors.¹²⁰ Defendants intended that the research of the scientists they funded would be distributed to and relied on by consumers when purchasing Defendants' products, including consumers in Puerto Rico.

93. The creation of a false perception of disagreement in the scientific community (despite the consensus that its own scientists, experts, and administrators had previously recognized) has evidently disrupted vital channels of communication between scientists and the public. A 2007 Yale University and Gallup poll found that while 71% of Americans personally believed that global warming was occurring, only 48% believed there was a consensus among the scientific community, and 40% believed there was a lot of disagreement among scientists about whether global warming was happening.¹²¹ Eight years later, a 2015 Yale-George Mason University poll found that “[o]nly one in ten Americans understands that nearly all climate scientists (more than 90%) are convinced that human-caused global warming is

¹¹⁹ E.g., Smithsonian Statement: Dr. Wei-Hock (Willie) Soon, Smithsonian (Feb. 26, 2015), <https://web.archive.org/web/20181105223030/https://www.si.edu/newsdesk/releases/smithsonian-statement-dr-weihoek-willie-soon>.

¹²⁰ Union of Concerned Scientists, Climate Deception Dossier #1: Dr. Wei-Hock Soon's Smithsonian Contracts, (July 2015), <https://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf> [https://perma.cc/JL2V-XYGL] & <https://s3.amazonaws.com/ucs-documents/global-warming/Climate-Deception-Dossier-1-Willie-Soon.pdf>.

¹²¹ American Opinions on Global Warming: A Yale/Gallup/Clearvision Poll, Yale Program on Climate Change Communication (July 31, 2007), <http://climatecommunication.yale.edu/publications/american-opinions-on-global-warming>.

occurring, and only half . . . believe that the majority do.”¹²² In addition, it determined that 33% of Americans believe that climate change is primarily due to natural causes, compared to 97% of peer-reviewed articles acknowledging that global warming is real and at least partly human-caused.¹²³ The lack of progress, and even regression, in the public understanding of climate science during this period (during which Defendants professed to accept the conclusions of conventional climate science) attests to the success of Defendants’ campaign of deception to thwart the dissemination of accurate scientific expertise to the public on the effects of fossil fuel consumption.

94. 2007 was the same year that the IPCC published its Fourth Assessment Report, in which it concluded that “there is a very high level of confidence that the net effect of human activities since 1750 has been warming.”¹²⁴ The IPCC defined “very high confidence” as a probability of at least 9 in 10.¹²⁵

95. Defendants, individually and through their memberships in trade associations, worked directly, and often in a deliberately concealed manner, to conceal and misrepresent the known dangers of fossil fuel products from consumers, the public, and the Commonwealth.

96. Defendants have funded dozens of think tanks, front groups, and dark money foundations that push climate change denial. These include the Competitive Enterprise Institute, the Heartland Institute, Frontiers for Freedom, the Committee for

¹²² Leiserowitz, et al., Climate Change in the American Mind (Yale Program on Climate Change Comm. & Geo. Mason U., Ctr. for Climate Change Comm eds., Oct. 2015), <https://climatecommunication.yale.edu/wp-content/uploads/2015/11/Climate-Change-American-Mind-October-20151.pdf>.

¹²³ Id. at 7.

¹²⁴ IPCC, Summary for Policymakers: A Report of Working Group I to the Fourth Assessment Report 3 (2007), <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-spm-1.pdf>.

¹²⁵ Ibid.

a Constructive Tomorrow and the Heritage Foundation. From 1998 to 2014, ExxonMobil spent nearly \$31 million to fund numerous organizations that misrepresented the scientific consensus that fossil fuel products were causing climate change, sea level rise, and harm to Puerto Rico, among other communities.¹²⁶ Several Defendants have been linked to other groups that undermine the scientific basis linking fossil fuel products to climate change and sea level rise, including the Frontiers of Freedom Institute and the George C. Marshall Institute.

97. Exxon acknowledged its own previous success in sowing uncertainty and slowing mitigation by funding climate denial groups. In its 2007 Corporate Citizenship Report, Exxon stated, “In 2008, we will stop contributing to several public policy research groups whose position on climate change could divert attention from the important debate over how the world will secure the energy needed for economic growth in an environmentally responsible manner.”¹²⁷ Despite this pronouncement, Exxon continued to be financially associated with several of those groups after the report’s release.

98. In a secretly recorded video from 2021, an Exxon executive admitted: “Do we aggressively fight against some of the science? Yes. Did we join some of these shadow groups to work against some of the early efforts? Yes, that’s true. There is nothing illegal about that. We were taking care of our investments. We were looking out for our shareholders.”¹²⁸

¹²⁶ ExxonSecrets.org, ExxonMobil Climate Denial Funding 1998–2014, <http://exxonsecrets.org/html/index.php> (last visited Oct. 14, 2022).

¹²⁷ ExxonMobil, 2007 Corporate Citizenship Report 41 (Dec. 31, 2007), <http://www.documentcloud.org/documents/2799777-ExxonMobil-2007-Corporate-Citizenship-Report.html>.

¹²⁸ Jeff Brady, Exxon Lobbyist Caught on Video Talking About Undermining Biden’s Climate Push, NPR (July 1, 2021), <https://www.npr.org/2021/07/01/1012138741/exxon-lobbyist-caught-on-video-talks-about-undermining-bidens-climate-push>

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99. In September 2015, journalists from Inside Climate News reported that Exxon Mobil had sophisticated knowledge about the causes and consequences of climate change and the role its products played in causing climate change as early as the 1970s.¹²⁹ These journalists discovered ExxonMobil's superior knowledge through extensive research of thousands of archived documents and interviews with former ExxonMobil employees.

100. Between October and December 2015, journalists from Columbia University's Journalism and Environment Project on Energy and the Environment and the Los Angeles Times also exposed the fact that ExxonMobil and other members of the fossil fuel industry had superior knowledge of the causes and consequences of climate change and the role their products played in causing climate change since the 1970s.¹³⁰ These journalists discovered ExxonMobil's superior knowledge through extensive research of archived documents, interviews with former ExxonMobil employees, and a review of scientific journals.

101. In November 2017, the Center for International Environmental Law issued a report revealing that Defendants, including API, had superior knowledge of the causes and consequences of climate change and the role fossil fuel products played in causing climate change since the 1970s.¹³¹

¹²⁹ Neela Banerjee et al., Exxon: The Road Not Taken, InsideClimate News (Sept. 16, 2015), <https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>.

¹³⁰ The Los Angeles Times published a series of three articles between October and December 2015. See Katie Jennings et al., How Exxon went from leader to skeptic on climate change research, L.A. Times (Oct. 23, 2015), <https://graphics.latimes.com/exxon-research>; Sara Jerving et al., What Exxon knew about the Earth's melting Arctic, L.A. Times (Oct. 9, 2015), <https://www.latimes.com/nation/la-na-what-exxon-knew-20151009-story.html>; Amy Lieberman & Susanne Rust, Big Oil braced for global warming while it fought regulations, L.A. Times (Dec. 31, 2015), <https://graphics.latimes.com/oil-operations>.

¹³¹ Caroll Muffett & Steven Feit, Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis, Ctr. for Int'l Envtl. Law 10 (2017), <https://www.ciel.org/reports/smoke-andfumes>.

102. Defendants could have contributed to the global effort to mitigate the impacts of greenhouse gas emissions, for example, by issuing warnings proportionate to the risks they knew from the wasteful use of their products and by ceasing their activities that sought to undermine and delay practical and technical strategies that would have enabled and supported a transition to a low-carbon future. Instead, Defendants undertook a momentous effort to mislead consumers and the public about the existential dangers of burning fossil fuels, all with the purpose and effect of perpetuating and hyperinflating fossil fuel consumption and delaying the arrival of alternative non-fossil fuel-based energy sources.

103. As a result of Defendants' unlawful, false, and deceptive conduct, consumers of Defendants' fossil fuel products and the public, in Puerto Rico as elsewhere, have been deliberately and needlessly misled about: the role of fossil fuel products in causing global warming, sea level rise, alterations in the hydrological cycle and the increase in extreme rainfall, heat waves, drought and other consequences of the climate crisis; the acceleration of global warming since the mid-Twentieth Century and its continuation; and the fact that the continued increase in fossil fuel consumption creates serious environmental threats and significant economic costs for coastal communities, including Puerto Rico. Consumers and the public in Puerto Rico and elsewhere have also been misled about the depth and breadth of the scientific evidence on anthropogenic climate change and, in particular, about the strength of the scientific consensus demonstrating the role of fossil fuels in causing both climate change and a wide range of potentially



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destructive consequences, including sea level rise, alterations in the hydrological cycle, extreme precipitation, heat waves, droughts and associated consequences.

104. By sowing doubt about the future consequences of unrestricted fossil fuel consumption, Defendants' deception campaign successfully delayed the transition to alternative energy sources, which Defendants predicted could penetrate half of a competitive energy market in 50 years if allowed to develop unhindered. This delay resulted in the emission of enormous amounts of avoidable greenhouse gases, thus ensuring that the harm caused by climate change will be substantially more severe than if Defendants had acted candidly, commensurate with their insider knowledge of climate risks.

IV. In contrast to their public statements, Defendants' internal actions demonstrate their knowledge of and intent to profit from the incessant use of fossil fuel products.

105. In contrast to their public efforts questioning the validity of the scientific consensus on anthropogenic climate change, Defendants' acts and omissions evidence their internal recognition of the reality of climate change and its likely consequences. Those actions include, but are not limited to, making multimillion-dollar investments in infrastructure for its own operations that recognize the reality of the coming climate-related anthropogenic change. Those investments included (among others): raising offshore oil platforms to protect them against sea level rise; reinforcing offshore oil platforms to withstand increased wave strength and storm severity; develop technology and infrastructure to extract, store and transport fossil fuels in a warming Arctic environment; and develop and patent



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designs of equipment intended to extract crude oil and/or natural gas in areas previously inaccessible due to the presence of polar ice sheets.¹³²

106. For example, in 1973, Exxon obtained a patent for a freighter capable of traversing sea ice¹³³ and for an oil tanker¹³⁴ designed specifically for use in previously unreachable areas of the Arctic.

107. In 1974, Chevron obtained a patent for a mobile Arctic drilling rig designed to withstand significant interference from lateral ice masses,¹³⁵ allowing drilling in areas with increased iceberg movement due to elevated temperature.

108. That same year, Texaco (Chevron) worked to obtain a patent for a method and apparatus to reduce ice forces on a marine structure prone to freezing in ice due to natural weather conditions,¹³⁶ allowing drilling in previously unreachable Arctic areas that would be seasonally accessible.

109. Shell obtained a patent similar to that of Texaco (Chevron) in 1984.¹³⁷

110. In 1989, Norske Shell, the Norwegian subsidiary of Royal Dutch Shell, modified the designs of a natural gas platform that was planned to be built in the North Sea to take into

¹³² Amy Lieberman & Susanne Rust, Big Oil Braced for Global Warming While It Fought Regulations, Los Angeles Times (Dec. 31, 2015), <https://graphics.latimes.com/oil-operations/>

¹³³ ExxonMobil Research Engineering Co., Patent US3727571A: Icebreaking cargo vessel (granted Apr. 17, 1973), <https://www.google.com/patents/US3727571>.

¹³⁴ ExxonMobil Research Engineering Co., Patent US3745960A: Tanker vessel (granted July 17, 1973), <https://www.google.com/patents/US3745960>.

¹³⁵ Chevron Research & Technology Co., Patent US3831385A: Arctic offshore platform (granted Aug. 27, 1974), <https://www.google.com/patents/US3831385>.

¹³⁶ Texaco Inc., Patent US3793840A: Mobile, arctic drilling and production platform (granted Feb. 26, 1974), <https://www.google.com/patents/US3793840>.

¹³⁷ Shell Oil Co., Patent US4427320A: Arctic offshore platform (granted Jan. 24, 1984), <https://www.google.com/patents/US4427320>.



account the expected rise in sea level. Those design changes were eventually carried out by Shell's contractors, adding substantial costs to the project.¹³⁸

a. The Troll field, off the Norwegian coast in the North Sea, was shown to contain large natural deposits of oil and gas in 1979, shortly after Norwegian oil and gas regulators approved Norske Shell to operate a portion of the field.

b. In 1986, the Norwegian parliament gave Norske Shell authority to complete the first phase of development of the Troll field's gas deposits, and Norske Shell began designing the "Troll A" gas platform, with the intention of starting operation of the platform in approximately 1995. Considering the large size of the gas deposits in the Troll field, the Troll A platform was projected to operate for approximately 70 years.

c. The rig was originally designed to be about 100 feet above sea level, the amount needed to stay above the waves in a once-in-a-hundred-year force storm.

d. In 1989, Shell engineers revised their plans to increase the platform height above water between 3 and 6 feet, specifically to account for the expected higher average sea levels and increased storm intensity due to global warming over the platform's 70-year operational life.¹³⁹

e. Shell projected that the additional 3 to 6 feet of construction over the water would increase the cost of the Troll A platform by as much as \$40 million.

¹³⁸ Greenhouse Effect: Shell Anticipates to Be Change, N.Y. Times (Dec. 20, 1989), <http://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html>.

¹³⁹ Id.; Amy Lieberman & Susanne Rust, Big Oil Braced for Global Warming While It Fought Regulations, Los Angeles Times (Dec. 31, 2015), <https://graphics.latimes.com/oil-operations/>



V. Defendants' actions have exacerbated the costs of adapting to and mitigating the adverse impacts of the climate crisis.

111. As greenhouse gas pollution accumulates in the atmosphere, some of which does not potentially dissipate for thousands of years (i.e., CO₂), climate changes and the consequent adverse environmental changes become more acute, and their frequencies and magnitudes increase. As these adverse environmental changes worsen and increase in frequency and magnitude, so do the physical, environmental, economic and social damages that result from them.

112. Thus, the delay in the introduction of alternative energy sources and related efforts to curb anthropogenic greenhouse gas emissions have increased environmental damage and the magnitude and cost of addressing that harm, including Puerto Rico, that have already occurred or are trapped by previous emissions.

113. Thus, Defendants' campaign to obscure the science of climate change to protect and expand the use of fossil fuels greatly aggravated and continues to compound the harm suffered by Puerto Rico and its residents.

114. The costs of inaction on anthropogenic climate change and its adverse environmental effects were not lost on Defendants. In a 1997 speech by John Browne, an executive of the BP America group, at Stanford University, Browne described the responsibility and opportunities of Defendants and the entire fossil fuel industry to reduce the use of fossil fuel products and mitigate the harm associated with the use and consumption of such products:

A new era demands a fresh perspective of the nature of society and responsibility.

We need to go beyond analysis and take action. It is a moment of change and for a rethinking corporate responsibility. . . . [T]here is now an effective consensus among the world's leading scientists and



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serious and well-informed people outside the scientific community that there is a discernible human influence on the climate, and a link between the concentration of carbon dioxide and the increase in temperature.

The prediction of the IPCC is that over the next century temperatures might rise by a further 1 and 3.5 degrees centigrade [1,8 °F-6,3 °F], and that sea levels might rise between 15 and 95 centimeters [5.9 and 37.4 inches]. Some of that impact is probably unavoidable, because it results from current emissions. . . .

[I]t would be unwise and potentially dangerous to ignore the mounting concern.

The time to consider the political dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven... but when the possibility cannot be discounted and is taken seriously by the society of which we are a part. . . .

We [the fossil fuel industry] have a responsibility to act, and I hope that through our actions we can contribute to a much wider process which is desirable and necessary.

BP accepts that responsibility and we're therefore taking some specific steps.

To control our own emissions.

To fund continuous scientific research.

To take initiatives for joint implementation.

To develop alternative fuels in the long term.

And to contribute to the public policy debate in search of wider global answers to the problem.¹⁴⁰

115. Notwithstanding Defendants' knowledge of the foreseeable, measurable, and significant harm associated with the unbridled consumption and use of their fossil fuel products, in Puerto Rico as elsewhere, and notwithstanding Defendants' knowledge of technologies and practices that could have helped reduce the foreseeable hazards associated with their fossil fuel products, Defendants continued

¹⁴⁰ John Browne BP Climate Change Speech To Stanford, ClimateFiles (May 19, 1997), <http://www.climatefiles.com/bp/bp-climate-change-speech-to-stanford>.



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deceptively and incorrectly marketing and promoting the intensive use of fossil fuels, and organized campaigns to hide the connection between their fossil fuel products and the climate crisis, dramatically increasing the cost of reduction. This campaign aimed to reach and influence consumers in Puerto Rico, along with consumers elsewhere. At all relevant times, Defendants were deeply familiar with the need to reduce the use of their fossil fuel products and associated global greenhouse gas emissions, mitigate the harms associated with the use and consumption of their products, and promote the development of alternative and clean energy sources. Examples of such recognition include, but are not limited to, the following:

f. In 1961, Phillips Petroleum Company filed a patent application for a method of purifying gas, among other things, since “natural gas containing gasoline hydrocarbons may contain undesirable amounts of sulfur and other compounds such as carbon dioxide that are not desirable in the finished gasoline product.”¹⁴¹

g. In 1963, Esso (Exxon Mobil) was awarded multiple patents on technologies for fuel cells,¹⁴² including on the design of a fuel cell and the necessary electrodes,¹⁴³ and on a process to increase the oxidation of a fuel, specifically methanol, to produce electricity in a fuel cell.¹⁴⁴

¹⁴¹ Phillips Petroleum Co., Patent US3228874A: Method for recovering a purified component from a gas (filed Aug. 22, 1961), <https://patents.google.com/patent/US3228874>.

¹⁴² Fuel cells use the chemical energy of hydrogen or other fuels to produce electricity. See U.S. Dep’t of Energy, Fuel Cells, <https://www.energy.gov/eere/fuelcells/fuel-cells> (last visited Oct. 16, 2022).

¹⁴³ ExxonMobil Research Engineering Co., Patent US3116169A: Fuel cell and fuel cell electrodes (granted Dec. 31, 1963), <https://www.google.com/patents/US3116169>.

¹⁴⁴ ExxonMobil Research Engineering Co., Patent US3113049A: Direct production of electrical energy from liquid fuels (granted Dec. 3, 1963), <https://www.google.com/patents/US3113049>.



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h. In 1970, Esso (Exxon Mobil) obtained a patent for a “motor and low-polluting propulsion system” that used an internal burner and an air compressor to reduce pollutant emissions, including CO₂ emissions, from gasoline combustion engines (the system also increased efficiency) from fossil fuel products used in such engines, thereby reducing the amount of fossil fuel products needed to operate engines equipped with this technology).¹⁴⁵

i. In 1980, Imperial Oil wrote in its “Review of Environmental Protection Activities for 1978-79”: “There is no doubt that the increase in the use of fossil fuels and the decrease in forest cover are aggravating the potential problem of increased CO₂ in the atmosphere. There is technology to remove CO₂ from hylene gases, but removing just 50% of CO₂ would double the cost of power generation.”¹⁴⁶

j. A 1987 company report produced by Shell on “Synthetic fuels and renewable energy” noted that while the “immediate prospects” were “limited,” “it is nevertheless by seeking commercial opportunities now and in the near future that the valuable expertise needed to win further development will be gained.” The report also notes that “the task of replacing oil resources is likely to become increasingly difficult and costly and there will be a growing need to develop efficient and convenient alternatives. Initially, these will complement and eventually replace valuable petroleum products. Many potential energy options are still unknown or are in very early stages of research and development. It takes decades for new energy sources to make a significant global contribution. Therefore,

¹⁴⁵ ExxonMobil Research Engineering Co., Patent US3513929A: Low-polluting engine and drive system (granted May 26, 1970), <https://www.google.com/patents/US3513929>.

¹⁴⁶ Imperial Oil Ltd., Review of Environmental Protection Activities for 1978–1979 2 (Aug. 6, 1980), <http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-ofEnvironmental.html#document/p2>.



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a sustained commitment over the rest of this century is needed to ensure that new technologies and those currently at a relatively early stage of development are available to meet energy needs in the next century.”¹⁴⁷

k. A 1989 article in an Exxon Corporate Research publication for the company’s use only said: “CO₂ emissions contribute about half of the forcing that leads to a possible improvement of the greenhouse effect. Since power generation from fossil fuels dominates modern CO₂ emissions, strategies to limit CO₂ growth focus in the short term on energy efficiency and in the long term on the development of alternative energy sources. If practiced at a level that significantly reduces the growth of greenhouse gases, these actions would have a substantial impact on society and our industry: in the short term due to reduced demand for current products, and in the long term due to the transition to entirely new energy systems.”¹⁴⁸

116. Defendants could have taken practical and cost-effective steps to mitigate the risks posed by fossil fuel products. Such alternatives could have included, among other measures:

a. Recognizing and sharing the validity of scientific evidence on anthropogenic climate change and the harm it will cause to individuals, communities (including the Commonwealth) and the environment. Accepting that evidence, along with the associated warnings and actions, would have advanced the agenda from determining whether to combat climate change and sea level rise to deciding how to combat it;

¹⁴⁷ Synthetic Fuels and Renewable Energy, Shell Service Briefing, no. 2, 1987, <https://assets.documentcloud.org/documents/4411089/Document2.pdf>.

¹⁴⁸ Brian Flannery, Greenhouse Science, Connections: Corporate Research, Exxon Research and Engineering Company (Fall 1989), <http://www.climatefiles.com/exxonmobil/1989-exxon-mobil-article-technologys-place-marketing-mix>.



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it would have avoided much of the public confusion that had occurred for more than 30 years, at least since 1988; and would have contributed to an earlier and faster transition to energy sources compatible with the minimization of catastrophic climate consequences.

b. Communicating frankly with Defendants' shareholders, banks, insurers, consumers, the public, regulators, and the Commonwealth, and warning them about the dangers of global warming from Defendants' fossil fuel products that were known to Defendants, which would have allowed those groups to make material and informed decisions about whether and how to address climate change and sea level rise in relation to Defendants' products, including whether and how much to invest in alternative clean energy sources compared to fossil fuels;

c. Refraining from affirmative efforts, whether direct, or through coalitions or front groups, to distort public debate and make many consumers and business and political leaders think that relevant science was much less certain than it really was; and

d. Sharing their internal scientific research with consumers and the public, and with other scientists and business leaders, to increase public understanding of the scientific underpinnings of climate change and its relationship to Defendants' fossil fuel products.

117. Despite its knowledge of the foreseeable harm associated with the consumption of Defendants' fossil fuel products, and despite the fossil fuel industry's existence and knowledge of opportunities that would have reduced



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the foreseeable dangers associated with those products, Defendants promoted and concealed the dangers of using their fossil fuel products unfairly and falsely.

VI. Defendants continue to mislead about the impact of their fossil fuel products on climate change through greenwashing campaigns and other misleading advertisements in Puerto Rico and elsewhere.

118. Defendants' coordinated campaign of misinformation and deception continues today, even as scientific consensus on the causes and consequences of climate change has been strengthened. Defendants have falsely claimed through advertising campaigns in Puerto Rico and/or campaigns aimed at reaching Puerto Rico that their businesses invest substantially in low-carbon technologies and renewable energy sources. In truth, each Defendant has invested the bare minimum in renewable energy while continuing to expand its fossil fuel production. Reasonable consumers exposed to Defendants' advertisements would understand that Defendants are far more committed to alternative energy sources than they actually are. Each has also claimed that some of its fossil fuel products are "green" or "non-polluting" and that the use of these products will satisfactorily reduce or mitigate the dangers of climate change. None of Defendants' fossil fuel products are "green" or "non-polluting" because, ultimately, they all continue to contribute to global warming.

119. These deceptive "greenwashing" campaigns aimed to reach and influence the public and consumers, including in Puerto Rico, and they did. Its goal is to capitalize on consumer concerns about climate change and make Puerto Rico consumers believe that Defendants are substantially diversified energy companies



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that make significant investments in low-carbon energy compatible with reducing catastrophic climate change.

120. However, contrary to this message, Defendants' investments in low-carbon energy are substantially and materially less than Defendants tell consumers. According to a recent analysis, between 2010 and 2018, BP spent 2.3% of total capital expenditure on low-carbon energy sources, Shell spent 1.2%, and Chevron and Exxon only 0.2% each¹⁴⁹.

121. Ultimately, although Defendants currently claim to support the reduction of greenhouse gas emissions, their conduct overrides these claims. Defendants continue to increase fossil fuel production globally; investing in the development of new fossil fuels, including shale oil and shale gas production, some of the highest carbon-emitting extraction projects; and planning for relentless oil and gas exploitation indefinitely in the future.

122. For example, Exxon's 2023 Corporate Plan update states that the company expects its oil and gas production to increase from 3.8 million barrels of oil equivalent per day in 2024 to approximately 4.2 million barrels of oil equivalent per day in 2027¹⁵⁰. Exxon expects capital expenditures of between \$23 billion and \$27 billion annually through 2027, and says it will "pursue" \$20 billion in vaguely defined "lower-emissions opportunities" through 2027¹⁵¹. In 2023 alone,

¹⁴⁹ Anjali Raval & Leslie Hook, Oil and Gas Advertising Spree Signals Industry's Dilemma, Financial Times (Mar. 9, 2019), <https://www.ft.com/content/5ab7edb2-3366-11e9-bd3a-8b2a211d90d5>.

¹⁵⁰ ExxonMobil, Corporate Plan Update Press Release (Dec. 6, 2023), https://dl1io3yog0oux5.cloudfront.net/_bec7eef29898003542d79405ad8d25a5/exxonmobil/db/2261/22171/file/Corporate_Plan_Update_-_Press_Release.pdf

¹⁵¹ Ibid.



Exxon spent nearly three times as much money on acquiring the fossil fuel producer Pioneer Natural Resources (\$59.5 billion) of which it said it will invest in “low-carbon solutions” (mainly carbon capture technology) until 2027.¹⁵²

123. Similarly, Chevron announced in late 2023 that it would spend \$18.5 billion to \$19.5 billion on new oil and gas projects in 2024, an 11% increase from the previous year.¹⁵³ By contrast, Chevron expects to spend only \$2 billion in 2024 to “reduce the carbon intensity of traditional operations and grow new energy business lines.”¹⁵⁴ In 2023 alone, Chevron spent more than five times as much money on acquiring the fossil fuel producer Hess than what it said it will spend on low-carbon energy projects through 2028.¹⁵⁵

124. Likewise, Shell spent almost six times more money on oil and gas development than on renewable technology in 2022.¹⁵⁶ In June 2023, Shell withdrew its 2021 pledge to reduce oil production each year for the rest of the decade, and announced instead that it would maintain its current level of oil production until 2030 and invest \$40 billion in oil and gas production between 2023 and 2035.¹⁵⁷ And, while Shell claims that approximately 12% of its capital expenditure in 2021 went to its “Renewables and Energy Solutions”, its own financial reports indicate that it dedicated only

¹⁵² Aryn Baker, How Chevron and Exxon’s Latest Fossil Fuel Deals compare to Their Green Spending, Time Magazine (Oct. 25, 2023), <https://time.com/6328441/chevron-exxon-fossil-fuel-acquisitions-vs-climate-efforts/>

¹⁵³ Sabrina Valle, Chevron Increases Project Spending Budget by 11% for 2024, Reuters (Dec. 6, 2023), <https://www.reuters.com/business/energy/chevron-forecasts-16-bln-capex-2024-2023-12-06/>

¹⁵⁴ Chevron, Chevron Announces \$16 Billion 2024 Capex Budget, (Dec. 6, 2023), <https://www.chevron.com/newsroom/2023/q4/chevron-announces-2024-capex-budget>

¹⁵⁵ Ibid.

¹⁵⁶ Ron Bousso, Exclusive: Shell Pivots Back to Oil to Win Over Investors, Reuters (June 9, 2023), <https://www.reuters.com/business/energy/shell-pivots-back-oil-win-over-investors-sources-2023-06-09/>

¹⁵⁷ Lottie Limb, Shell Joins BP and Total In U-Turning on Climate Pledges to “Reward Shareholders”, euronews.green (June 15, 2023), <https://www.euronews.com/green/2023/06/15/shell-joins-bp-and-total-in-u-turningon-climate-pledges-to-reward-shareholders>



approximately 1.5% of its capital expenditure to the development of renewable energy sources such as wind and solar energy production, with the vast majority of the rest of the expenditure going to natural gas-related projects.¹⁵⁸ Shell also announced that, despite its record profits in 2022, it would not increase spending on renewables and energy solutions and would instead focus new spending on fossil fuel production¹⁵⁹.

125. BP has also lowered its stated decarbonization targets recently. In 2020, BP declared its intention to reduce the company's total upstream emissions by 20% by 2025 and between 35% and 40% by 2030. However, in February 2023, BP lowered those projections to a 10% to 15% reduction by 2025 and to a reduction from 20 to 30% by 2030.^{160, 161} BP had also committed in 2020 to reduce its total oil and gas production by 40% from 2019 levels to 2030.¹⁶² However, again in 2023, BP lowered its target to a 25% reduction.¹⁶³

126. In 2023, ConocoPhillips announced that it planned to increase its oil and gas production by up to 5% each year over the next decade, with significant production growth expected at its shale oil assets in both the United States

¹⁵⁸ Oliver Milman, Shell's actual spending on renewables is fraction of what it claims, group alleges, The Guardian (Feb. 1, 2023) <https://www.theguardian.com/business/2023/feb/01/shell-renewable-energy-spending-sec-globalwitness>

¹⁵⁹ Will Mathis, Shell Hits the Brakes on Growing Renewables Unit After Record 2022 Profit, Bloomberg (Feb. 2, 2023), <https://www.bloomberg.com/news/articles/2023-02-02/shell-to-pause-renewables-unit-s-spending-growthafter-record-2022>

¹⁶⁰ Evan Halper and Aaron Gregg, BP Dials Back Climate Pledge Amid Soaring Oil Profits, The Washington Post (February 7, 2023), <https://www.washingtonpost.com/business/2023/02/07/bp-climate-emissions-oil-profits/>

¹⁶¹ BP, Getting to Net Zero, <https://www.bp.com/en/global/corporate/sustainability/getting-to-net-zero.html> (last accessed Feb. 5, 2024); BP, BP Integrated Energy Company Strategy Update (Feb. 7, 2023), <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/4q-2022-update-on-strategicprogress.html>

¹⁶² Shadia Nasralla and Ron Bousso, BP to cut fossil fuels output by 40% by 2030, Reuters, (August 4, 2020) <https://www.reuters.com/article/us-bp-outlook/bp-to-cut-fossil-fuels-output-by-40-by-2030-idUSKCN2500NH/>
¹⁶³ Stanley Reed, BP, in a reversal, Says It Will Produce More Oil and Gas, The New York Times (Feb. 7, 2023) <https://www.nytimes.com/2023/02/07/business/bp-oil-gas-profits.html>

¹⁶³ Stanley Reed, BP, in a Reversal, Says It Will Produce More Oil and Gas, The New York Times (Feb. 7, 2023) <https://www.nytimes.com/2023/02/07/business/bp-oil-gas-profits.html>

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and in Canada.¹⁶⁴ ConocoPhillips also recently announced plans to move forward with the development of the Willow oil drilling project in Alaska, which will cost up to \$7 billion and produce approximately 600 million barrels of oil over its lifetime.¹⁶⁵ In 2022, ConocoPhillips spent \$150 million “to support low-carbon opportunities,”¹⁶⁶ which accounted for just 1.4% of its \$10.2 billion in capital expenditures for that year; the rest of which was dedicated to the company’s fossil fuel operations.¹⁶⁷

127. Defendants’ greenwashing campaigns deceptively downplay their own role in causing climate change, even suggesting that small changes in consumer choices and behavior can adequately address climate change. These campaigns deceptively portray Defendants as part of the solution to climate change and distract from the fact that their fossil fuel products are the primary driver of global warming.

128. Below are representative excerpts from Defendants’ greenwashing campaigns, which present a false image of Defendants as clean energy innovators taking meaningful action to address climate change. Defendants’ actions to further entrench the production and consumption

¹⁶⁴ Liz Hampton and Mrinalika Roy, Conoco Forecasts Big Cash Flow Gains, Up to 5% Output Growth, Reuters (April 12, 2023), <https://www.reuters.com/business/energy/conocophillips-expects-spending-average-10-bln-annually-next-decade-2023-04-12/>

¹⁶⁵ Ibid; see also ConocoPhillips, ConocoPhillips Makes Final Investment Decision to Develop the Willow Project (Dec. 22, 2023), <https://www.conocophillips.com/news-media/story/conocophillips-makes-final-investmentdecision-to-develop-the-willow-project/>.

¹⁶⁶ ConocoPhillips, Scope 1 and 2 Emissions Reduction Activities, <https://www.conocophillips.com/sustainability/low-carbon-technologies/scope-1-and-2-emissions-reductionactivities/#:~:text=In%202022%2C%20ConocoPhillips%20spent%20about,global%20operations%20through%20the%20MACC.>

¹⁶⁷ ConocoPhillips, ConocoPhillips Reports Fourth-Quarter, Full-Year 2022 Results, (Feb. 2, 2023), <https://www.conocophillips.com/news-media/story/conocophillips-reports-fourth-quarter-full-year-2022-results-and176-preliminary-reserve-replacement-ratio-announces-2023-guidance-and-planned-return-of-capital-of-11-billiondeclares-quarterly-dividend-and-variable-return-of-cash-distribution/>



of fossil fuels flatly contradict its public claims of corporate responsibility and support for reducing global greenhouse gas emissions. Functionally, Defendants have removed fossil fuels from their brand, but not from their business operations. On the contrary, its greenwashing ads are misleading to consumers in Puerto Rico.

A. Exxon's Deceptive Greenwashing Campaigns

129. Exxon currently runs a series of full-page ads in print editions and publications in the electronic edition of The New York Times, as well as on Exxon's YouTube channel, in which Exxon misleadingly promotes its efforts to develop energy from alternative sources such as algae and plant waste, efforts that are extremely small relative to the investments Exxon continues to make in fossil fuel production.

130. For example, an online ad in The New York Times, accessible and marketed to consumers in Puerto Rico, promotes the company's development of algal biofuels. The ad misleadingly tells consumers that Exxon is "working to decrease [its] overall carbon footprint" and that the company's "sustainable and environmentally friendly" biodiesel fuel could reduce "carbon emissions from transportation" by more than 50%.¹⁶⁸

131. Just a few years ago, in 2018, Exxon claimed that it would produce 10,000 barrels of algal biofuel by 2025 and that this fuel could reduce "carbon emissions from transportation" by more than fifty percent.¹⁶⁹ In 2019, Exxon continued to advertise

¹⁶⁸ The Future of Energy? It May Come From Where You Least Expect (ExxonMobil Paid Post), N.Y. Times, <https://www.nytimes.com/paidpost/exxonmobil/the-future-of-energy-it-may-come-from-where-you-leastexpect.html>.

¹⁶⁹ Ibid.



that “it was growing algae for biofuels that could one day power planes, ships, and trucks with fuel, and cut their emissions in half.”¹⁷⁰

132. Exxon ultimately invested just \$350 million of the \$600 million it had pledged to develop the technology before quietly shutting down the project in December 2022.¹⁷¹ But even \$600 million probably wouldn’t have been enough; algae researchers believe it would take several *billion* dollars to truly commercialize biofuels, and that doesn’t even take into account the “fundamental biological limitations” associated with this technology.¹⁷² In fact, Exxon spent nearly half of its actual investment in algae biofuel development on announcing its commitment to algae biofuels.¹⁷³ In addition to not disclosing the very small scope of these efforts, Exxon’s ads fail to acknowledge that Exxon’s biodiesel fuel is generally a blend that uses only 5% to 20% biofuel, with the rest being made up of fossil fuel.¹⁷⁴ Exxon’s greenwashing ads therefore deceptively exaggerate both the “sustainable” nature or the “eco-friendly” nature of its investment in biodiesel as its scope.

133. Exxon’s ads touting its investments in “sustainable and environmentally friendly” energy sources also fail to mention that the company’s investment in alternative energy is minuscule compared to its current increase in

¹⁷⁰ Exxon Mobil, Algae Potential, iSpot TV (Oct. 19, 2019), <https://www.ispot.tv/ad/ovGn/exxon-mobil-algae-potential>

¹⁷¹ Amy Westervelt, Big Oil Firms Touted Algae as Climate Solution. Now All Have Pulled Funding, The Guardian (March 17, 2023), <https://www.theguardian.com/environment/2023/mar/17/big-oil-algae-biofuel-funding-cutexxonmobil>

¹⁷² Ibid. see also Ben Elgin and Kevin Crowley, Exxon Retreats From Major Climate Effort to Make Biofuels From Algae, Bloomberg (Feb. 10, 2023), <https://www.bloomberg.com/news/articles/2023-02-10/exxon-retreats-frommajor-climate-effort-to-make-biofuels-from-algae>

¹⁷³ Ibid.

¹⁷⁴ See ExxonMobil, Mobility Reimagined: On the Road To Lower GHG Emission, at 8, https://corporate.exxonmobil.com/-/media/global/files/energy-and-innovation/road-transportation-whitepaper_020623.pdf

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its habitual exploration, development, and production activities throughout the world for regular fossil fuel. As explained above, Exxon has consistently spent (and will continue to spend) the overwhelming majority of its capital expenditures on maintaining and expanding fossil fuel production.

134. To complement this deceptive campaign, Exxon has promoted dozens of multimedia ads on platforms such as Instagram, Twitter, Facebook, and LinkedIn, where Exxon has millions of followers on social media and its content has received hundreds of thousands of “likes” and “views.” These ads overwhelmingly emphasize its supposed leadership in research on emissions reductions, algal biofuels, solutions to climate change, and clean energy research. These ads were intended for and reached the public and consumers of Puerto Rico. An ordinary consumer watching these ads would end up believing that Exxon has invested significantly in the development and deployment of alternative energy technologies, when in fact almost all of the company’s expenditures are directed at the present and future development of oil and gas that is hurtling the world toward climate catastrophe. Exxon’s failure to inform ordinary consumers that its touted clean energy investments account for only a minuscule percentage of its spending (and that it intends to increase fossil fuel production and sales in the future) makes these ads materially misleading.

B. Shell’s deceptive greenwashing campaigns

135. Like Exxon, Shell has deceptively marketed itself to consumers in Puerto Rico as environmentally conscious through advertisements in publications such as The New York Times. Ads are targeted to and reach



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consumers in Puerto Rico and aim to influence consumer demand for Shell products.

136. As part of Shell’s “Make the Future” campaign, the company ran numerous ads that can currently be seen on The New York Times website,¹⁷⁵ in which the company touts its investment in new energy sources, including liquefied natural gas (“LNG”) and biofuel, which Shell refers to as “cleaner sources.”

137. One Shell ad in the Washington Post, “The Making of Sustainable Mobility”, refers to LNG as “a critical component of a sustainable energy mix” and a “low-carbon fuel” that could “help decrease” CO₂ emissions.¹⁷⁶ The ad emphasizes Shell’s leadership in “setting the course” towards a “low-carbon mobility future.” Similarly, another Shell ad in The Washington Post, “The Mobility Quandary,” emphasizes Shell’s role in working to counter climate change through investments in alternative energy: “Shell is a more important player than one might expect in this nascent movement to achieve a transportation future with less pollution and more efficiency.”¹⁷⁷

138. Shell’s statements emphasizing its involvement in many energy-related areas of research, development and deployment are misleading; the company’s investments and activities are substantially less than its advertisements would have consumers believe. As explained above, only 1.2% of Shell’s capital expenditure

¹⁷⁵ See, e.g., Moving Forward: A Path To Net-Zero Emissions By 2070 (Shell Paid Post), N.Y. Times, <https://www.nytimes.com/paidpost/shell/ul/moving-forward-a-path-to-net-zero-emissions-by-2070.html>.

¹⁷⁶ See e.g., The Making of Sustainable Mobility (Content from Shell), Wash. Post, <https://www.washingtonpost.com/brand-studio/shell/the-making-of-sustainable-mobility>.

¹⁷⁷ The Mobility Quandary (Content from Shell), Wash. Post., <https://www.washingtonpost.com/brandstudio/shell/the-mobility-quandary> (“Another critical component of a sustainable energy mix in transportation is further investment in natural gas, a cleaner-burning fossil fuel . . .”).

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between 2010 and 2018 went to low-carbon energy sources, and that figure is still far outpaced by the continued expansion of Shell's fossil fuel business.¹⁷⁸

139. Shell's ads about "Make the Future" also misled consumers about the extent to which Shell has invested in clean energy technology. For example, "The Mobility Quandary" touts Shell's investments in hydrogen fuel cell technology, promoting hydrogen as "long-term sustainable" and "one of the cleanest sources" powering electric vehicles, and states that "[V]ehicules of hydrogen fuel cells . . . They only emit water vapor from their exhaust pipes."¹⁷⁹ Shell's "In for the Long Haul" ad in The New York Times similarly promotes its investment in hydrogen fuel cells, as well as biofuels, as significant attempts to mitigate climate change.¹⁸⁰

140. Shell's failure to inform average consumers that its touted clean energy investments account for only a minuscule percentage of its spending (and that it intends to increase fossil fuel production and sales in the future) makes its ads materially misleading.

141. In June 2023, the United Kingdom's Advertising Standards Authority banned Shell's marketing campaign describing Shell as a renewable energy provider, EV charging installer, and driver of the energy transition. The Advertising Standards Authority decided that consumers were likely to interpret marketing materials as a "broader claim about

¹⁷⁸ Raval & Hook, Oil and Gas Spending Spree Signals Industry's Dilemma, *supra* note 192.

¹⁷⁹ Shell, The Mobility Quandary, *supra* note 229.

¹⁸⁰ Moving Forward: A Path to Net-Zero Emissions by 2070 (Content from Shell), N.Y. Times, <https://www.nytimes.com/paidpost/shell/ul/moving-forward-a-path-to-net-zero-emissions-by-2070.html>.



Shell as a whole providing cleaner energy.” Since the “vast majority” of its operations were not clean energy, the campaign was misleading.¹⁸¹

C. BP’s deceptive greenwashing campaigns

142. BP has also deceptively portrayed itself as a company that diversifies its energy portfolio and reduces its reliance on fossil fuel sales, while its alternative energy portfolio is negligible compared to the company’s ever-expanding fossil fuel portfolio. To this end, BP has employed a series of misleading greenwashing advertisements, which are intended to influence consumer demand for its products, including consumers in Puerto Rico.

143. BP ran its extensive “Beyond Petroleum” advertising and rebranding campaign from 2000 to 2008 and even changed its logo to a solar glow, which evokes the sun’s renewable resource. BP uses the solar glow logo to advertise at its gas stations in Puerto Rico, where consumers buy BP gasoline. The “Beyond Petroleum” advertising campaign falsely portrayed the company as a company that was highly committed to low-carbon energy sources and no longer invested, but rather went “beyond” oil and other fossil fuels. In fact, BP invested a small percentage of its total capital expenditure during this period in alternative energy research. The vast majority of its capital expenditures were focused on the exploration, production, refining, and marketing of fossil fuels.¹⁸² The company eventually abandoned its solar

¹⁸¹ Ed Davey, Shell’s Clean Energy Advertising Campaign is Misleading, UK Watchdog Says, Associated Press (June 7, 2023), <https://apnews.com/article/shell-climate-ad-ban-clean-energy-a1322233e3ba7e8fa7760367f13dd58c>; see also Advertising Standards Authority, ASA Ruling on Shell UK Ltd t/a Shell, https://climatecasechart.com/wp-content/uploads/non-us-case-documents/2023/20230607_21511_decision.pdf.

¹⁸² See BP, Annual Reports and Accounts 2008, <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-accounts-2008.pdf>.



and wind assets in 2011 and 2013, respectively, and even the name “Beyond Petroleum” in 2013.¹⁸³

144. In 2019, BP launched an advertising campaign called “Possibilities Everywhere.” These ads were misleading both in their description of BP as a company heavily involved in non-fossil energy systems, including wind, solar, and electric vehicles, and in their description of natural gas as environmentally friendly.

145. The One Possibilities Everywhere ad, titled “Better Fuels to Power Your Busy Life,” read:

We [] want, and need, [] energy to be more respectful of the planet. At BP, we work to make our energy cleaner and better... At BP, we spare no effort to provide [the] additional energy the world needs while also finding new ways to produce and deliver it with 53 fewer emissions... We’re bringing solar and wind power to homes from the U.S. to India. We’re increasing the supply of cleaner-burning natural gas... More energy with fewer emissions? We see possibilities everywhere to help the world move forward.¹⁸⁴

The accompanying video showed an active home as a voiceover read: “We all want more energy, but with less carbon footprint. That is why at BP we work to generate less polluting and better energy.”¹⁸⁵

146. But BP’s claim that non-fossil energy systems make up a substantial part of its business was materially false and misleading. At the time of the ad, BP owned only about 1.7 gigawatts (“GW”) of wind capacity, a figure dwarfed by other companies such as GE, Siemens, and Vestas (with approximately 39 GW, 26 GW, and 23 GW of

¹⁸³ Javier E. David, ‘Beyond Petroleum’ No More? BP Goes Back to Basics, CNBC (Apr. 20, 2013), <http://www.cnbc.com/id/100647034>.

¹⁸⁴ See BP, Better fuels To Power Your Busy Life, <https://web.archive.org/web/20191130155554/https://www.bp.com/en/global/corporate/who-we-are/possibilitieseverywhere/energy-for-busy-lives.html>.

¹⁸⁵ Id.



capacity, respectively).¹⁸⁶ In general, the installed wind capacity in the United States was approximately 100 GW, meaning that BP's installed capacity accounted for just 1% of the market.¹⁸⁷ However, in "Blade Runners", another ad in BP's "Possibilities Everywhere" campaign, the company is described as "one of the leading wind energy companies in the United States."¹⁸⁸ In short, BP's relatively small wind energy portfolio was substantially smaller than what was conveyed in the company's advertisements.

147. The same goes for BP's activities in the solar energy sector, which mainly consist of the purchase of the solar company Lightsource (renamed Lightsource BP).¹⁸⁹ The total purchase price (\$454 million) represents only a minuscule percentage of BP's annual capital expenditure (\$16 billion in 2023), almost all of which is spent on fossil fuel production.¹⁹⁰ This is a far cry from BP's claim that it was "comprehensively" looking for "new" ways to produce low-emission energy and that it was playing a "leading role" in "promoting a low-carbon future." These claims convey the misleading impression to ordinary consumers that BP invests substantially in the development and deployment of clean energy technology, when in fact almost all of BP's present and future

¹⁸⁶ For BP's wind capacity, see Press Release, BP Advances Offshore Wind Growth Strategy (Feb. 8, 2021), <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-advances-offshore-wind-growthstrategy.html>. For wind capacity from GE, Siemens, and Vestas, see Abby McClain, The 15 Largest Wind Power Companies in the World (July 12, 2022), <https://www.zippia.com/advice/largest-wind-power-companies/>.

¹⁸⁷ See Elizabeth Ingram, U.S. Wind Capacity Grew 8% in 2019, AWEA says, Renewable Energy World (April 10, 2019), <https://www.renewableenergyworld.com/wind-power/u-s-wind-capacity-grew-8-in-2018-awea-says/>.

¹⁸⁸ See BP Blade Runners, <https://web.archive.org/web/20191130192545/https://www.bp.com/en/global/corporate/who-we-are/possibilitieseverywhere/wind-and-natural-gas.html>.

¹⁸⁹ BP Annual Report and Form 20-F 42 (2017), <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf>; see also Ron Bousso, BP to Buy Remaining 50% In Solar JV Lightsource BP, Reuters (Nov. 30, 2023), <https://www.reuters.com/business/energy/bp-buy-remaining-50-solar-jv-lightsource-bp-2023-11-30/>.

¹⁹⁰ See BP BP's Fourth Quarter and Full Year 2023 Results, <https://www.bp.com/en/global/corporate/investors/results-reporting-and-presentations/quarterly-results-andwebcast.html>.

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expenditures are aimed at the development of oil and gas that is hurtling the world toward climate catastrophe. BP's failure to inform ordinary consumers that its touted clean energy investments account for only a minuscule percentage of its spending (and that it intends to increase fossil fuel production and sales in the future) makes these ads materially misleading.

148. However, in BP's "Rise and Shine" web ad, the company specifically touts its partnership with Lightsource. "Our economic gurus believe that [solar] could account for 10% of the world's energy by 2040," the ad read, and "to help make that a reality, we've partnered with Europe's largest solar company, [Lightsource BP]."¹⁹¹ The ad highlighted Lightsource BP's 6.3 MW floating solar power station near London and Lightsource BP's agreement with Budweiser to supply renewable energy to its breweries in the United Kingdom. "Projects like these are improving the possibilities of solar energy," BP said, "and even rainy days can't dampen enthusiasm for this fast-growing energy source. That's because, regardless of the weather, our cleaner-burning natural gas can play a supporting role in keeping your kettle ready for action."¹⁹²

149. This description of solar as BP's big interest, with natural gas used only as a backup, is also false. BP's investments in natural gas exceed its investments in solar by a factor of about 100 or more, and only a small fraction of its natural gas products, approximately 5% or less, are used to support renewables. Therefore, the overall impression given by the ads (that

¹⁹¹ BP, Rise and Shine.

¹⁹² Ibid.



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BP invests substantially in solar energy and that its natural gas is used only as a backup) is materially misleading to consumers.

D. Chevron's deceptive greenwashing campaigns

150. Chevron also engaged in greenwashing campaigns designed to mislead consumers about Chevron's products and its commitment to addressing climate change, including consumers in Puerto Rico.

151. In 2001, Chevron developed and shared a sophisticated information management system to collect greenhouse gas emissions data from its exploration and production to help regulate and set reduction targets.¹⁹³ Beyond this technological advancement, Chevron touted "cost-effective renewable energy" as part of its business plan for several years and launched an advertising campaign in 2010 promoting the company's shift to renewable energy. Despite this rhetoric (and renewable energy group Chevron's \$27 million profits in 2013), Chevron sold its renewable energy unit in 2014.¹⁹⁴

152. Chevron's 2007 "Will You Join Us?" campaign and its 2008 "I Will" campaign misleadingly portrayed the company as a leader in renewable energy. The campaign ads presented minor changes to consumer choices (e.g., changing light bulbs) as sufficient to address environmental issues such as climate change.¹⁹⁵

¹⁹³ Press Release, Chevron, Chevron Introduces New System to Manage Energy Use (Sept. 25, 2001), <https://web.archive.org/web/20170207205638/https://www.chevron.com/stories/chevron-introduces-new-system-to-manage-energy-use>.

¹⁹⁴ Ben Elgin, Chevron Dims the Lights on Putting green Power, Bloomberg (May 29, 2014), <https://www.bloomberg.com/news/articles/2014-05-29/chevron-dims-the-lights-on-renewable-energy-projects>.

¹⁹⁵ See Duncan MacLeod, Chevron Will You Join Us?, Inspiration Room (Oct. 9, 2007), <http://theinspirationroom.com/daily/2007/chevron-will-you-join-us>. See also Jean Halliday, Chevron: We're Not Big Bad Oil, AdAge (Sept. 28, 2007), <https://adage.com/article/news/chevron-big-bad-oil/120785>.



153. The overall goal of the campaigns was to shift the perception of blame and responsibility for global warming to consumers and to make the role of Chevron and the fossil fuel industry in general seem small. The tricky solution that was promoted among consumers was not to move away from fossil fuels, but to implement small changes in consumer behavior and continue to rely on fossil fuel products. By portraying greenhouse gas emissions as derived from numerous sources besides fossil fuels, Chevron's ads obscured the fact that fossil fuels are the primary cause of rising greenhouse gas emissions and the primary driver of climate change.

154. Misleading messages were emblazoned over images of average Americans, as in the example highlighted below:



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Figure 10: Chevron “Will You Join Us?” ad

155. In 2010, Chevron launched an advertising campaign entitled “We Agree.” The print, Internet, and television advertising campaign expanded throughout the United States and internationally. For example, the ad below highlighted Chevron’s alleged commitment to renewable energy development, saying in large letters next to a photograph of a young girl, “It’s time for oil companies to support renewable energy development. We agree.” The ad emphasized: “We are not alone behind renewable energy. We are rising to the challenge of making it affordable and reliable on a large scale.”

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Figure 11: Chevron's "We Agree" ad

156. Chevron's description of itself as a leader in renewable energy was false and misleading. In reality, only 0.2% of Chevron's capital expenditure between 2010 and 2018 went to low-carbon energy sources, and 99.8% went to continued fossil fuel exploration and development, a stark contrast to the message communicated to consumers through the company's advertisements.¹⁹⁶

157. Chevron's "We Agree" campaign also included misleading television ads. In an ad focused on renewables, a professor says, "Okay, listen. Someone has to get serious. We need renewable energy." To which a Chevron environmental operations employee responds, "At Chevron we are investing millions in solar and biofuel technologies to make it work." In reality, Chevron continued to focus overwhelmingly on fossil fuel extraction and development, and its

¹⁹⁶ Raval & Hook, Oil and Gas Advertising Spree Signals Industry's Dilemma, *supra* note 192.

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“millions” investment in renewables is minuscule compared to its investment of billions in fossil fuels. An average consumer looking at “We Agree” ads would falsely believe that Chevron has invested significantly in the development and deployment of clean technologies, while nearly all of the company’s spending is directed toward oil and gas development. The fact that Chevron has failed to inform average consumers that its touted clean energy investments account for only a minuscule percentage of its spending (and that it intends to increase fossil fuel production and sales in the future) makes these ads materially misleading.

E. ConocoPhillips’ deceptive greenwashing campaigns

158. In 2012, ConocoPhillips published a Sustainable Development Report in which it “recognized that human activity, including the burning of fossil fuels, is contributing to the increase in greenhouse gas (GHG) concentrations in the atmosphere, which can lead to adverse changes in global climate conditions.”¹⁹⁷ The objectives of the Report included “understanding our GHG footprint”, “[r]educing our GHG emissions” and “evaluating and developing technologies for renewable energy.”¹⁹⁸

159. This report stands in stark contrast to ConocoPhillips’ 2012 10-K filing with the SEC, which reveals the company’s exclusive focus on producing fossil fuels for global distribution: “As an independent exploration and production company, we focus solely on our core business of exploration, development, and production of crude oil and natural gas globally.” The filing further highlighted the company’s “growing oil sands and shale businesses in North America.” . . . and

¹⁹⁷ ConocoPhillips, Sustainable Development; Climate Change Position 17 (2012), <http://static.conocophillips.com/files/resources/2012-sd-report.pdf>.

¹⁹⁸ Id. at 17, 20.



a global exploration program,”¹⁹⁹ making it clear that it had no intention of meeting the commitments contained in its Sustainable Development Report.

160. In fact, in 2019, ConocoPhillips produced more than 700,000 barrels of crude oil per day and more than 2.8 million cubic feet of natural gas per day.²⁰⁰ ConocoPhillips’ failure to inform ordinary consumers that its touted clean energy investments account for only a minuscule percentage of its spending (and that it intends to increase fossil fuel production and sales in the future) makes its touted sustainability goals materially misleading.

VII. Defendants also made misleading claims about specific “green” or “less polluting” fossil fuel products.

161. Defendants have also engaged in extensive and highly misleading marketing efforts aimed at promoting certain of their fossil fuel products as “green” and beneficial to the environment.

162. Defendants’ advertising and promotional materials fail to disclose the extreme safety risk associated with the use of fossil fuel products, which are causing “catastrophic” climate change, as Defendants understood it for decades. Defendants continue to omit that important information to this day, consistent with their goal of maintaining consumer demand for their fossil fuel products despite the risks they pose to the planet and its inhabitants.

163. Defendants misrepresent that consumer use of certain fossil fuel products actually helps customers reduce emissions and gain greater fuel economy. However, emphasizing the relative

¹⁹⁹ ConocoPhillips, Annual Report (Form 10-K) 32 (Dec. 31, 2012), <https://www.sec.gov/Archives/edgar/data/1163165/000119312513065426/d452384d10k.htm>.

²⁰⁰ ConocoPhillips, 2019 Annual Report 168 (2019), <https://static.conocophillips.com/files/resources/2019-conocophillips-annual-report-19-0895.pdf>.



climate and “ecological” benefits while concealing the dangerous effects of continued high rates of fossil fuel use, it creates a misleading overall picture that obscures the terrible climate impacts resulting from normal consumer use of Defendants’ fossil fuel products. Contrary to Defendants’ “green” claims, the development, production, refining, and consumer use of Defendants’ fossil fuel products (including products that can produce relatively more efficient engine performance) increase greenhouse gas emissions to the detriment of public health and consumer welfare. No matter what chemicals are added to the fuel mix, burning gasoline always emits greenhouse gases, which contribute to climate change and its associated impacts. Defendants’ additive marketing cloaks their gasoline products with an environmentally friendly appearance while also misleadingly concealing the dangerous climate effects of burning fossil fuels.

164. In addition, while Defendants actively promoted their “cleaner” gasoline products at Puerto Rico gas stations and on their companies’ websites, they massively expanded fossil fuel production and increased emissions. If consumers had understood the full extent to which Defendants’ products contributed to climate change and that Defendants had in fact not materially invested in alternative energy sources or were otherwise environmentally cautious, they likely would have acted differently, *for example*, by not buying Defendants’ products or buying less of them.

165. In promoting these and other fossil fuel products, including at their branded gas stations in Puerto Rico, Defendants fail to disclose the fact that

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fossil fuels are one of the main causes of climate change and that current levels of fossil fuel use (even supposedly “less polluting”) or more efficient products, pose a direct threat to Puerto Ricans and the environment. Defendants’ omissions in this regard are consistent with their objective of influencing consumer demand for their fossil fuel products through greenwashing. Defendants also do not require their suppliers and third-party retail outlets to disclose facts regarding the impact of fossil fuel consumption and their “cleaner” alternatives on climate change when selling Defendants’ products.

166. Defendants’ marketing of these fossil fuel products to Puerto Rico consumers as “safe,” “non-polluting,” “emissions-reducing,” and implicitly beneficial to the climate (when the production and use of such products is the primary cause of climate change) is reminiscent of the tobacco industry’s effort to promote “low-tar” and “mild” cigarettes as an alternative to quitting smoking after the public has taken awareness of the life-threatening health harms associated with smoking²⁰¹.

167. Defendants’ product promotions are positioned to assure consumers that the purchase and use of their products are beneficial in addressing climate change, when in reality, the continued use of such fossil fuels is extremely harmful, just like tobacco companies deceptively promoted “low-tar” and “mild” cigarettes as a healthier and less harmful option.

²⁰¹ See American Cancer Society Cancer Action Network, “23 Year History of the Racketeering Lawsuit Against the Tobacco Industry: Guilty of Deceiving the American Public” (June 29, 2023), https://www.fightcancer.org/sites/default/files/history_of_doj_rico_lawsuit_fact_sheet_final_6.29.23.pdf, at pp. 1, 5; see also Tobacco Control Legal Consortium, The Verdict Is In: Findings from United States v. Philip Morris, Section on Light Cigarettes pp. 1–9, <https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-verdict-is-in.pdf>



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though tobacco companies knew that any use of cigarettes was harmful.

168. As with tobacco companies' misleading use of scientific and engineering terms in advertising to enhance the credibility of their claims, Defendants' promotional materials for their fossil fuel products also deceptively invoke similar terminology to falsely convey to Puerto Rico consumers that the use of these products benefits the environment.

169. For example, Exxon advertises that its Synergy Diesel Efficient fuel will allow vehicles to "reduce emissions and burn cleaner."²⁰² Exxon also publishes online content under the slogan "Energy Factor," in which Exxon states that it "offers a range of products, including lightweight materials and advanced lubricants and fuels, that improve performance, durability, and efficiency to reduce emissions." With this "portfolio of solutions," Exxon says, it is carrying out "the vital task of reducing greenhouse gas emissions across the transportation sector."²⁰³

170. Similarly, Shell announces that the use of its gasoline "produces fewer emissions."²⁰⁴

171. BP markets its Invigorate gasoline as a "proprietary detergent additive" that "helps cars become clean and efficient machines," and its bp Diesel as a fuel that "can reduce emissions with a powerful,

²⁰² Exxon, Synergy Diesel Efficient Fuels For Fleets, Light-Duty Trucks, and Passenger Vehicles, <https://www.exxon.com/en/synergy-dieselefficient#:~:text=Synergy%20Diesel%20Efficient%20fuel%20is,means%20less%20maintenance%20and%20do wnti me> (last visited Feb. 5, 2024).

²⁰³ Exxon, Transforming Transportation, <https://corporate.exxonmobil.com/what-we-do/lower-emissiontransportation#Transportationsectors> (last visited Feb. 5, 2024).

²⁰⁴ See, e.g., Shell, Shell Nitrogen Enriched Gasolines, <https://www.shell.us/motorist/shell-fuels/shell-nitrogenenriched-gasolines.html> (last visited Oct. 14, 2022).



reliable and energy-efficient fuel made with low sulfur content and additives.”²⁰⁵ BP’s website also announces that its fuel selection “includes a growing number of low-carbon and carbon-neutral products.”²⁰⁶

172. Chevron advertises its Techron fuel with claims that emphasize its purported positive environmental qualities, such as: “less is more,” “minimize emissions,” and “up to 50% less polluting.”²⁰⁷ In a Q&A session on Chevron’s website, one question reads, “I’m concerned about the environment. Does Techron affect my car’s emissions? Chevron responds that “[g]asolines with Techron” clean carburetors, fuel injectors, and intake valves, “which reduces emissions.”²⁰⁸

173. These distortions, which were intended to reach and influence Puerto Rico’s consumers, were misleading because they emphasize the purportedly environmentally beneficial qualities of fuels without revealing the key role fossil fuels play in causing climate change.

174. As with tobacco companies’ use of scientific terms to promote “soft” cigarettes, Defendants’ claim that their new supposedly high-tech fossil fuel products help consumers reduce emissions makes their promotional materials misleading, because they seek to convey, with the imprimatur of scientific credibility: a general message that is

²⁰⁵ See, e.g., BP, Our Fuels, https://www.bp.com/en_us/united-states/home/products-and-services/fuels.html (last visited 14, 2022).

²⁰⁶ BP, Advanced Fuels and Lubricants, https://www.bp.com/en_us/united-states/home/what-we-do/advanced-fuelsand-lubricants.html (last visited, Feb. 5, 2022).

²⁰⁷ See, e.g., Chevron, Techron, <https://www.techron.com> (last visited Oct. 14, 2022).

²⁰⁸ Id.



false and contradicts Defendants' own decades-long internal knowledge of the dangers of fossil fuel use.

VIII. Defendants sought to have consumers trust their concealments and omissions regarding the dangers of their fossil fuel products.

175. Consumers' use of fossil fuel products, particularly when driving cars and other gasoline-powered vehicles, contributes significantly to climate change. However, as a result of Defendants' sustained and widespread disinformation campaign, many consumers in Puerto Rico did not become aware of the magnitude of the threat posed by the use of fossil fuels, or the relationship between their purchasing behavior and climate change.

176. Defendants have been aware for decades that clean energy presents a viable alternative to their fossil fuel products. In 1980, Exxon predicted that if non-fossil energy sources were sought, these could penetrate half of a competitive energy market in about 50 years²⁰⁹. This internal estimate was based on extensive modelling within the academic community, including research by MIT's David Rose that concluded that a transition to non-fossil energy could be achieved in about 50 years. Exxon circulated an internal memo approving Rose's conclusions, saying they were "based on reasonable assumptions."²¹⁰ But instead of seeking a transition to clean energy or warning the public about the dangers of burning fossil fuels, Defendants chose to deceive consumers in order to preserve their profits and assets.

²⁰⁹ H. Shaw and P. P. McCall, Exxon Research and Engineering Company's Technological Forecast: CO₂ Greenhouse Effect 5 (Dec. 18, 1980).

²¹⁰ CO₂ Greenhouse Effect: A Technical Review, Coordination and Planning Division, Exxon Research and Engineering Company 18 (April 1, 1982).



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177. By misleading Puerto Rico consumers about the climate impacts of using fossil fuel products, including to the point of claiming that some of their products may benefit the environment, and by failing to disclose to consumers the climate risks associated with the purchase and use of those products, Defendants deprived and continue to deprive consumers of information about the consequences of their purchasing decisions.

178. Defendants intended that Puerto Rico consumers rely on their omissions and concealments and continue to purchase fossil fuel products from Defendants without regard for the harm such products caused.

179. Knowledge of the risks associated with the routine use of fossil fuel products is critical to Puerto Rico consumers' decisions to purchase and use those products. As with cigarettes, history shows that when consumers are aware of the harmful effects or qualities of the products they buy, they often choose to stop buying them, reduce their purchases, or make different purchasing decisions. This phenomenon is especially true when products are shown to harm public health or the environment. For example, increased consumer awareness of the role of pesticides in harming human health, worker health, and the environment has spurred a growing market for organically grown food without the use of pesticides. By having access to information about how their food is grown, consumers have demanded healthier choices and the market has responded.

180. Similarly, a consumer who received accurate information that fossil fuel use was one of the main drivers of climate change and



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the resulting hazards for the environment and people might buy fewer fossil fuel products or decide not to buy any at all. Consumers can choose to avoid or combine car trips, carpooling, switch to more fuel-efficient vehicles, hybrid vehicles or electric vehicles, use a car-sharing service; look for transportation alternatives in whole or in part, if available (e.g., public transportation, biking, or walking), or adopt any combination of these options. In addition, informed consumers contribute to solving environmental problems by supporting companies that perceive that they are developing “ecological” or more environmentally friendly products.

181. By affirmatively concealing and misrepresenting the catastrophic climate effects of fossil fuel consumption, Defendants deprived consumers of the facts necessary to make informed decisions about how and where to purchase energy. If consumers had been fully and accurately aware of the public health risks of burning fossil fuels, they could have formed a customer base receptive to clean energy alternatives decades before such demand developed. The delay in the emergence of a scalable market for non-fossil fuel energy is attributable to the industry-induced ignorance of consumers of the reality and severity of the climate consequences associated with the normal use of fossil fuels. The social transition to a low-carbon economy would have been much cheaper and more efficient if Defendants had publicly acknowledged the conclusions reached by their own scientists and the scientific community at large. As a result of this delay, huge amounts of avoidable greenhouse gas emissions have been released into the atmosphere, resulting in



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higher total emissions, higher emissions peaks and all associated climate effects.

IX. Defendants' deceit was recently revealed as well as its continuing negligent behavior.

182. The fact that Defendants and their representatives knowingly provided incomplete and deceitful information to the public, including consumers in Puerto Rico, was revealed recently, among other things, due to:

- a. Defendants' campaign to deceive, described above, which is ongoing;
- b. Defendants' efforts to discredit climate change science and create the appearance that said science is uncertain.
- c. Defendants' concealment and distortion as to the fact that their products cause catastrophic harm; and
- d. The fact that Defendants used front groups such as API, the Global Climate Coalition and the National Mining Association to conceal their participation in these actions, which diverted the Commonwealth of Puerto Rico from its investigation.

183. Furthermore, Defendants' negligent and illicit conduct, in the form of distortions, omissions and deceit, began decades ago and continues through today. As described above, Defendants, directly and/or through membership in other organizations, continue distorting their own activities, the fact that their products cause climate change and the danger that climate change entails.

Below, we provide examples of Defendants' constant distortions, omissions, and deceit.



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184. In June 2018, a post in Shell's official blog stated the following: "the potential extent of change in the climate itself could now be eliminated. In other words, the prospect of runaway climate change might have passed."²¹¹ However, this statement is not supported by valid scientific research and was and is contradicted by accredited studies.²¹²

185. In March 2018, Chevron published a report titled "Climate Change Resilience: a framework for decision making," which deceptively indicated that "[t]he IPCC Fifth Assessment Report concludes that there is warming of the climate system and that warming is due in part to human activity."²¹³ In reality, the fifth assessment report concluded that "[i]t is extremely likely [defined as a probability of 95% to 100%] that human influence has been the leading cause of warming observed since the mid-20th Century."²¹⁴

186. Notwithstanding this fact, in April 2017, the executive director and president of Chevron's Board of Directors, John Watson, said in a podcast: "There is no doubt that there has been some warming; you can look at temperature data and see it. The question and debate revolves around how much and the degree to which it is caused by humans."²¹⁵

²¹¹ David Hone, Has Climate Change Run Its Course??, Shell Climate Change Blog (June 14, 2018), <https://blogs.shell.com/2018/06/14/has-climate-change-run-its-course>.

²¹² See, e.g., Fiona Harvey, Carbon Emissions from Warming Soils Could Trigger Disastrous Feedback Loop, The Guardian (Oct. 5, 2017), <https://www.theguardian.com/environment/2017/oct/05/carbon-emissions-warming-soils-higher-than-estimated-signalling-tipping-points>; Jonathan Watts, Domino-Effect of Climate Events Could Move Earth into a 'Hothouse' State, The Guardian (Aug. 7, 2018), <https://www.theguardian.com/environment/2018/aug/06/domino-effect-of-climate-events-could-push-earth-into-a-hothouse-state>; Fiona Harvey, 'Tipping Points' Could Exacerbate Climate Crisis, Scientists Fear, The Guardian (Oct. 9, 2018), <https://www.theguardian.com/environment/2018/oct/09/tipping-points-could-exacerbate-climate-crisis-scientists-fear>.

²¹³ Chevron, Climate Change Resilience: A Framework for Decision Making 20 (Mar. 2018), <https://www.chevron.com/-/media/shared-media/documents/climate-change-resilience.pdf>.

²¹⁴ IPCC, Summary for Policymakers: Working Group I Contribution to the Fifth Assessment Report 17 (2013), https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf.

²¹⁵ Columbia Energy Exchange Podcast, John Watson, CEO, Chevron (Apr. 10, 2017), <https://www.energypolicy.columbia.edu/us-energy-markets-policy>.

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187. Similarly, ConocoPhillips's "Climate Change Position," as it appeared in the company's web page until 2020, stated that human activity is "contributing to" climate change and emphasizes "uncertainties," although science is clear: "ConocoPhillips recognizes that human activity, including the burning of fossil fuels, is contributing to increased concentrations of greenhouse gases (GHG) in the atmosphere that can lead to adverse changes in global climate... While uncertainties remain, we continue to manage greenhouse gas emissions in our operations and to integrate climate change related activities and goals into our business planning."²¹⁶

188. In 2015, then executive director of Exxon Mobil, Rex Tillerson, argued that climate models were not sufficiently solid to justify distancing from fossil fuels, and said "What if everything we do, it turns out our models are lousy, and we don't get the effects we predict? Mankind has this enormous capacity to deal with adversity, and those solutions will present themselves as those challenges become clear."²¹⁷

X. The Commonwealth has suffered, is suffering and will suffer damages as a result of the Defendant's illicit conduct.

189. By sowing doubts as to the future consequences of the unrestricted consumption of fossil fuels, the Defendant's deceitful campaigns have delayed the transition to alternative sources of energy, which the Defendants predicted could penetrate half of a competitive energy market in 50 years if they were allowed to develop without obstacles.

²¹⁶ ConocoPhillips, Climate Change Position (Oct. 28, 2020), <https://web.archive.org/web/20201028115814/https://www.conocophillips.com/sustainability/integrating-sustainability/sustainable-developmentgovernance/policies-positions/climate-change-position/>.

²¹⁷ Dallas Morning News, Exxon CEO: Let's Wait for Science to Improve Before Solving Problem of Climate Change (May 27, 2015), <https://www.dallasnews.com/business/energy/2015/05/28/exxon-ceo-let-s-wait-for-science-to-improve-before-solving-problem-of-climate-change>.



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This delay resulted in the emission of huge amounts of greenhouse gases that would have otherwise been avoided, ensuring that the damage caused by climate change to Puerto Rico will be substantially greater than if the Defendants had acted honestly, in accordance with their internal knowledge.

190. As a direct and immediate cause of the deceitful and illegal conduct of the Defendants, the Commonwealth of Puerto Rico, its citizens, and its natural resources have suffered and will continue to suffer serious damages inflicted by climate change in the future.²¹⁸ For example:

- a. It is foreseen that the sea level around Puerto Rico will continue to go up for centuries.

The increase in sea levels threatens to flood the communities in the area of the coast (where 60 % of the population lives) and cause damages to the essential infrastructure, including the Port of San Juan, the main airports, energy plants, water and sewer infrastructure, and hundreds of kilometers of roads.

- b. Puerto Ricans are facing serious threats to human health as a result of climate change, including more frequent and intense heatwaves, extreme storms, forest fires and a higher transmission of pathogens. The Government of Puerto Rico will have to spend high sums of money to adapt the medical, energy and transportation infrastructure of the Commonwealth in order to address these health risks.

- c. Climate change threatens many of the natural and environmental resources of Puerto Rico. In particular, the acidification of the ocean, hotter

²¹⁸ See Puerto Rico Climate Change Council, Puerto Rico's State of the Climate, 2014–2021: Assessing Puerto Rico's Social-Ecological Vulnerabilities in a Changing Climate (2022), https://www.drna.pr.gov/wp-content/uploads/2022/10/PR_StateOfTheClimate_2014-2021_PRCCC-09-2022.pdf



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ocean temperatures, and extreme storms, have already caused serious coral bleaching and destruction to the coral reefs around Puerto Rico. Furthermore, it is probable that climate change provokes changes in fresh water, coastal and marine ecosystems in Puerto Rico, which would affect their ability to provide habitats for flora and fauna that they support, including commercially important species and species that are rare or exclusive to Puerto Rico.

- d. It is expected that the tourism industry, an important component of Puerto Rico's economy, shall incur significant losses as the rise in sea levels erodes the beaches and floods cultural sites, extreme storms and forest fires damage tourist attractions, hot temperatures increase tourist thermal stress and coral reefs get bleached and depleted.
- e. It is predicted that the agricultural industry will be negatively affected by the greater intensity of precipitation, drought, and rise in the sea level which introduces salt water in aquifers that agricultural land depends on.

191. These consequences shall disproportionately affect elderly and low-income populations, as climate change exacerbates public health and environmental stress factors associated with socio-economic and age disparities.²¹⁹ Socially vulnerable Puerto Ricans, who are already subject to higher rates of adverse health effects such as asthma, cancer and respiratory disease,

²¹⁹ See Instituto de Estadísticas, Puerto Rico Community Survey 2015-2019 (2021), <https://censo.estadisticas.pr/EncuestaComunidad> (44.1% of Puerto Rican households live below the poverty level).



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often are less prepared to adapt to a warming world because their communities lack the infrastructure and resources necessary to resist the threats posed by climate change.^{220, 221}

192. In a 2018 study, the majority of Puerto Ricans who indicated that they had been affected by coastal flooding during storms and hurricanes were in the population with the lowest income range.²²² 46% of the housing units in Puerto Rico (some 408,279 units) are held by low- and moderate-income housing in areas that could be permanently flooded by a rise of 0.9 meters in sea level.²²³

193. The consequences of climate change shall not only be felt in Puerto Rico's coastal communities. For example, climate change negatively impacts agriculture and production of food throughout the Commonwealth of Puerto Rico: the drought of 2014-2016 affected 64 % of Puerto Rico and caused \$13.8 million in agricultural losses.²²⁴ Furthermore, it is expected that the rise in sea level will cause Puerto Rico's mangrove swamps to migrate inland, invading the habitat of the dry forest that many species depend on.²²⁵

²²⁰ See Departamento de Recursos Naturales y Ambientales, Climate Change Risk and Resilience Public Perception Study (2018), <http://dna.pr.gov/wp-content/uploads/2019/01/Informe-final-Estudio-de-percepcion-publica-sobre-cambio-climatico.pdf>

²²¹ See P. Méndez-Lázaro et al., Climate change, heat, and mortality in the tropical urban area of San Juan, Puerto Rico, 62 Int'l J. of Biometeorology 699 (2018)

²²² Departamento de Recursos Naturales y Ambientales, Climate Change Risk and Resilience Public Perception Study

²²³ Gobierno de Puerto Rico, State Consolidated Plan for Housing and Community Development Programs 2020–2024 & 2020 Annual Action Plan (2020), <https://www.vivienda.pr.gov/wp-content/uploads/2021/03/STATE-CONSOLIDATED-PLAN-2020-24-2020-ANNUAL-ACTION-PLAN-PARTE-1.pdf>.

²²⁴ N.L. Álvarez-Berrios et al., Correlating drought conservation practices and drought vulnerability in a tropical agricultural system Renewable Agriculture and Food Systems, 33 Renewable Agriculture and Food Systems 279 (2018).

²²⁵ See Puerto Rico Climate Change Council, State of the Climate.

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